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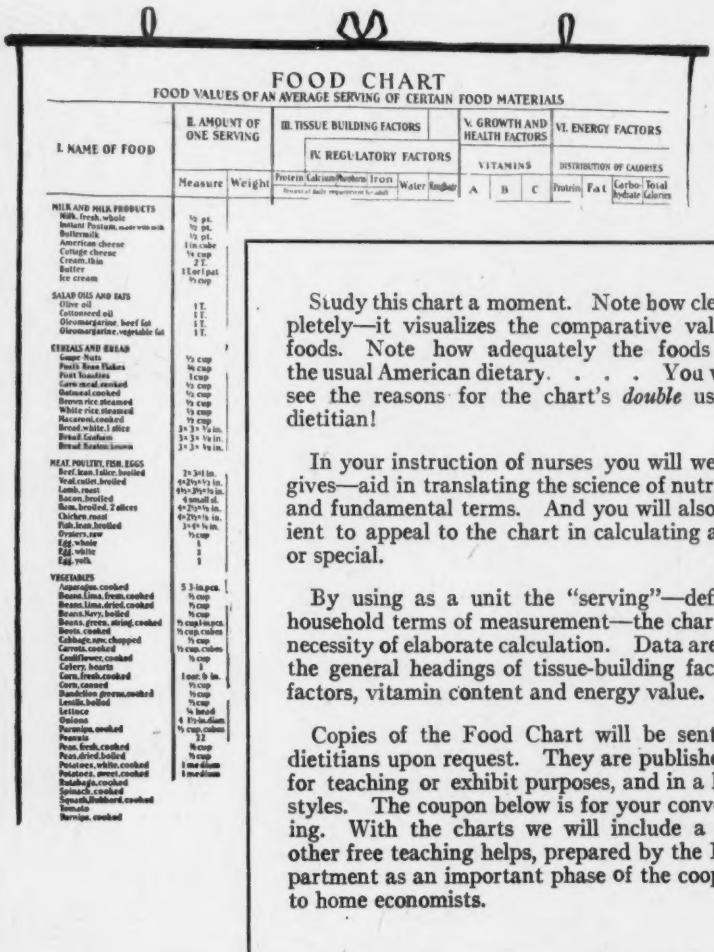
This FOOD CHART

simplifies planning and teaching



FOOD CHART

FOOD VALUES OF AN AVERAGE SERVING OF CERTAIN FOOD MATERIALS

I. NAME OF FOOD	II. AMOUNT OF ONE SERVING		III. TISSUE BUILDING FACTORS			IV. REGULATORY FACTORS		V. GROWTH AND HEALTH FACTORS				VI. ENERGY FACTORS			
								VITAMINS				DISTRIBUTION OF CALORIES			
	Measure	Weight	Protein	Calcium	Phosphorus	Iron	Water	A	B	C		Protein	Fat	Carbo-hydrate	Total Calories
MILK AND MILK PRODUCTS															
Milk, fresh, whole	½ pt.														
Instant Postum, made with milk	½ pt.														
Buttermilk	½ pt.														
American cheese	1 in. cube														
Cottage cheese	¼ cup														
Cream, thin	2 T.														
Butter	1 T. or 1 pat														
Ice cream	½ cup														
SALAD OILS AND FATS															
Olive oil	1 T.														
Cottonseed oil	1 T.														
Oleomargarine, beef fat	1 T.														
Oleomargarine, vegetable fat	1 T.														
CEREALS AND BREAD															
Grape-Nuts	½ cup														
Post's Bran Flakes	¾ cup														
Post Toasties	1 cup														
Corn meal, cooked	½ cup														
Oatmeal, cooked	½ cup														
Brown rice, steamed	½ cup														
White rice, steamed	½ cup														
Macaroni, cooked	½ cup														
Bread, white, 1 slice	3 × 3 × ½ in.														
Bread, Graham	3 × 3 × ½ in.														
Bread, Boston brown	3 × 3 × ½ in.														
MEAT, POULTRY, FISH, EGGS															
Beef, lean, 1 slice, broiled	2 × 3 × 1 in.														
Veal, cutlet, broiled	4 × 2½ × ½ in.														
Lamb, roast	6½ × 3½ × ½ in.														
Bacon, broiled	4 small sl.														
Ham, broiled, 2 slices	4 × 2½ × ⅛ in.														
Chicken, roast	6 × 2½ × ⅛ in.														
Fish, lean, broiled	3 × 4 × ¾ in.														
Oysters, raw	½ cup														
Egg, whole	1														
Egg, white	1														
Egg, yolk	1														
VEGETABLES															
Asparagus, cooked	5 3-in. pcs.														
Beans, lima, fresh, cooked	½ cup														
Beans, lima, dried, cooked	½ cup														
Beans, Navy, boiled	½ cup														
Beans, green, string, cooked	½ cup 1-in. pcs.														
Beets, cooked	½ cup, cubes														
Cabbage, raw, chopped	½ cup														
Carrots, cooked	½ cup, cubes														
Cauliflower, cooked	½ cup														
Celery, hearts	1														
Corn, fresh, cooked	1 ear, 6 in.														
Corn, canned	½ cup														
Dandelion greens, cooked	½ cup														
Lentils, boiled	½ cup														
Lettuce	¼ head														
Onions	4 Fry. in. diam.														
Parsnips, cooked	½ cup, cubes														
Peanuts	22														
Peas, fresh, cooked	½ cup														
Peas, dried, boiled	½ cup														
Potatoes, white, cooked	1 medium														
Potatoes, sweet, cooked	1 medium														
Rutabaga, cooked															
Spinach, cooked															
Squash, Hubbard, cooked															
Tomato															
Turnips, cooked															

Let us send it to you!

Study this chart a moment. Note how clearly—how completely—it visualizes the comparative values of different foods. Note how adequately the foods included cover the usual American dietary. . . . You will immediately see the reasons for the chart's *double* usefulness to the dietitian!

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By using as a unit the "serving"—defined in familiar household terms of measurement—the chart eliminates the necessity of elaborate calculation. Data are arranged under the general headings of tissue-building factors, regulatory factors, vitamin content and energy value.

Copies of the Food Chart will be sent to doctors and dietitians upon request. They are published in a wall size for teaching or exhibit purposes, and in a hand size in two styles. The coupon below is for your convenience in ordering. With the charts we will include a complete set of other free teaching helps, prepared by the Educational Department as an important phase of the cooperation it offers to home economists.

EDUCATIONAL DEPARTMENT, POSTUM CEREAL COMPANY, INC.

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Please send me copies of your Food Chart, as checked below:

One Chart, wall size.....(check if desired).

.....Charts, hand size, tinned.

.....Charts, hand size, untinned.

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The Journal of

The American Dietetic Association

NUTRITION IN A HEALTH PROGRAM[1]

BERTHA B. EDWARDS

Supervisor of Nutrition, East Harlem Nursing and Health Demonstration, New York City

The impetus which the science of health, in recent years has given to the practice of preventive medicine, and to the teaching of positive health in a variety of institutions, both public and private, has tended to broaden our ever changing conception of what constitutes a public health program.

Not yet have we passed the age of specialization when the welfare of a single family in a community may be dependent upon and parcelled out to as many as ten trained and specially equipped individuals. Impractical, wasteful and even ridiculous as this situation appears, the controversy relative to generalization versus specialization continues, with a leaning, we are pleased to note, toward the former in so far as a community health service is implied. To see the individual as a whole, not in his integral parts, to know the family as a unit, not as separate members only, is becoming the ideal of the modern health worker as she gropes for a clearer vision of the part she is to play in her chosen field.

The evolution of a progressive health service presents many significant and fascinating features, each of which marks a stage of development with its accompanying scientific grasp of the health problems as they are represented by the family units of a given locality.

Our notice has been directed in times past to the imperative need of medical attention and nursing care for maternity cases and infants, for tubercular patients and contacts, and for the acutely ill. Examining physicians and nurses are provided for school children. Of late, the heretofore neglected pre-school child has claimed his share of attention,

[1]Read before the Section on Social Service of the American Dietetic Association, Atlantic City, October 13, 1926.

while the newer public health advocates periodic physical examinations for all adults, regardless of apparent health. In brief, diagnosis and treatment at little or no cost have been made available for the public, especially the poorer classes. The prevention of illness and preservation of normal health has become our slogan.

This is not as simple as it sounds. True, tonsils can be removed, teeth can be cleaned, treated, filled or extracted, and even artificial sets constructed with great success when necessary, tubercular cases can be isolated, cardiacs, nephritics, and diabetics given the assistance which enables them to live quite normally—but the malnourished child, and the child with persistently poor posture, the rachitic baby, the mentally defective child or adult, the behavior cases and the ignorant parent continue to present acutely difficult problems in the field of public health.

To meet such situations in a practical and effective manner has become the goal of a few health organizations, operating at present. Their work is based upon the health needs of the community as represented by the family unit. The machinery which they have developed to supplement and carry on the health teaching in the homes consists, in the main, of clinics and classes where individual and group instruction may be given which will cover the essential health education required for maternity cases, infants, pre-school and school children. It is the purpose of this paper to discuss briefly the part a nutritionist may take in such a Health Program, conscious that her rôle is still in the making and that it will necessarily change as the possibilities of the entire health program become more apparent and as the goal of efficient service is approached.

Fundamental to the successful functioning of nutrition as a part of a scheme for a public health enterprise we would recognize:

1. That the advancement in community health standards can be brought about only through an educational program, planned and presented in a manner which will enlist the interest, respect and coöperation of the family members. That is, the methods employed must conform to the best known principles of psychology and pedagogy.
2. The subject matter, grouped of necessity about the essential health facts relative to the daily conduct of wholesome individual, family, and community life must be scientifically sound and substantially practical, or applicable to the situation.
3. The nutritional status of an individual or a group, is closely related to, if not directly a result of the manner of living. Again we find heritage and environment jointly responsible for bringing about that physical condition we term good or poor nutrition.

4. The nutritionist is one of a group of specialists who are endeavoring through their combined efforts to realize the accomplishment of a tremendous task—a worthwhile service.

With this attitude toward the service, those to whom the service is given, and her co-workers, the nutritionist in a Health Center or clinic would seem limited in her work only by lack of imagination, funds or physical strength.

First and foremost the Health Center offers to the nutritionist the privileges of field work; an entrance into the homes where family life, genuine, unadorned and vital may be observed, studied and discussed with family members. From these contacts she gains first hand knowledge of the needs of the community and an opportunity to learn experimentally the best means of approach, the wisest methods of procedure, and the truest measures of success. Her scientific knowledge, ideas, ideals and standards are tested, tried, reconstructed, then applied again and again in her effort to meet situations sanely and with satisfaction.

To the family she becomes a friend, helper, advisor, in whom they have confidence, to whom they may go for assistance. Her guidance to other available sources of help is frequently as valuable as her direct suggestions. Her constant emphasis upon the relationship of daily practices or habits in regard to diet, and hygiene (both physical and mental) to the health and happiness of the family should in time bring about a more wholesome manner of living and direct the attention of the parents to the importance of the thoughtful care and training of their children.

To help create that stimulation which causes parents to recognize the home and community health problems, to desire improvement to the point of actually seeking knowledge and asking advice, to realize their own abilities and responsibilities in an effort which results in better health and homes, is another opportunity which the nutritionist shares with her co-workers in health education.

The development of independent coöperation in thought and action as individuals, families, and community groups, are qualities which the nutritionist may help to foster as she proceeds with her instruction in good nutrition, as truly as may the nurse, social worker or school teacher. Remembering that the only uplifting which is worth the effort is the power one may give others to do their own liftng, becomes a balancing factor when one is tempted to employ more sentiment than sense in her desire for rapid achievement. She learns that the more enduring results are frequently obtained through slow yet persistent effort and that her

success is in ratio to her interest in the situation, her sympathetic understanding of the difficulties and her ability to make clear those difficulties, their undesirability and means of eradication to the family.

In the clinics as in the home the nutritionist is a teacher in the truest and finest sense. Here her ability to grasp situations, to obtain, select, and record facts that are relevant and important as she talks with the parents concerning their children, enables her to coöperate with the doctor and nurse in rendering a really splendid service to that family. The clinic provides for the physical examination of the child and complements the health teaching in the home; 1st by explaining the doctor's findings and recommendations, and, 2nd by making clear that portion of the teaching which has been found to be difficult in the home. Those who have observed the tragic results of ignorant parents or who have known the daily experiences of a health worker in mismanaged, poverty-stricken homes, whose children are untrained and uncontrolled will agree that any reasonable means is amply worth the cost which will bring home to parents the importance of correct habit formation in infants and young children, and which will at the same time give suggestions as to successful methods for obtaining the formation of beneficial habits at various ages.

Coöperation with those in charge of the clinics makes possible the constant presentation of these facts and methods in an attractive, clear and convincing manner. Thus posters, photographs, exhibits, and actual demonstrations are employed in:

A. The maternity clinic to give the mothers practical knowledge on such topics as:
   1. A mother's daily schedule for conducting her home
   2. The correct diet for a nursing or pregnant mother
   3. How to guard against albuminuria and constipation
   4. The best clothing for a mother
   5. The kind of home a child should have

B. In infant welfare clinics to teach the care of infants in regard to:
   1. Suitable clothing
   2. How to give a sun bath
   3. Formula preparation
   4. Supplementary foods, how to prepare and when to give them
   5. The influence of regularity in all habits

C. In the pre-school clinics to show the care of a pre-school child:
   1. A child's day, providing for growth and development, activity, rest, etc.
   2. The kind of room and bed a child should sleep in

3. Foods which a child needs daily, how and when to serve them
4. Cleanliness, the bath, care of skin, hair and hands
5. Suitable clothing for summer and winter
6. How to prevent colds
7. Play, exercise, fresh air
8. Attractive, durable and appropriate toys

D. In the dental clinic to create interest in the care of the teeth:

1. How and when to brush the teeth
2. Foods which will build good teeth and bones
3. Parents' responsibility in the care of childrens' teeth
4. The importance of the first teeth

Booklets and printed leaflets are explained and given to the parents whenever they are needed to help emphasize or summarize the facts to be learned.

Another splendid opportunity for the nutritionist to develop and present graphically those principles for which she assumes responsibility in the health program is afforded through the class work at the Center. The subjects chosen for discussion at these group meetings are in response to the needs of the homes as sensed by the workers, as suggested by the families themselves, or by the particular interest of the group. Greatest benefit has been derived from those classes whose members have participated most in the activities of the group. The sociability of these occasions appeals strongly to every age; especially has this been found true of the mothers who have few interests outside their homes. Some have attended as many as three entire units of the maternity class sessions.

From the maternity class the mother is graduated with her infant into the Cradle Class which she attends weekly, bi-monthly, or monthly till the child is two years of age. What better soil could one desire for the planting of knowledge concerning the care of infants than a weekly class of 20 or 30 babies and their mothers?

The mothers of the pre-school children have their own very special, absorbing, and difficult problems. Far less understood, less attended than the infant is the child of from two to six years of age. The mothers are astounded when they begin to realize the importance of care and training during this period. For the sake of learning they quite willingly give one afternoon a week for ten or twelve successive weeks. The children's play hour conducted in an adjoining room, while the mothers are discussing the topic of the day, furnishes one of the most effective means yet discovered of demonstrating methods for controlling, teaching and developing little children.

The older boys and girls become enthusiastic helpers for the organization by bringing the younger brothers and sisters who are malnourished or who have poor posture or are tuberculosis contacts, to the weight and posture classes on Saturday mornings. The home practice of healthful habits is stimulated in these classes and interesting means employed to demonstrate to the children the relation of habits to growth, appearance, real comfort and health.

General interests of the home and community, and the problems relative to adolescent children may be discussed at the monthly meetings of the Mothers' Welfare or the Fathers' Community Clubs. Live meetings these, attended each by 20 or 25 earnest and interested parents whose children are members of the Health House clinics. Each session is one more precious occasion when community sentiment toward wholesome life and higher standards of living may be created.

The constant exchange and sharing of knowledge, interests and experiences between workers in a common field enables the nutritionist as she reaps richly from others, to extend to them the value of her specialized training. If the policy of the organization permits, she may assume the supervision of nutrition work done by the nurses or social workers. To the equipment of these trained workers she is qualified to supply the tools they lack. Their health teaching, thus enriched by the emphasis upon and elaboration of the nutritional factors becomes vital in many more homes and to a far greater number of people than the nutritionist could possibly reach directly.

A nutritionist so placed will be constantly on the alert to bring to her associates the very latest scientific nutritional and educational facts. She will strive to stimulate that interest in investigation and study which promotes work that is thorough, satisfying and progressive. If she is open minded and ever reaching for the best ways and means by which to further the health cause she will welcome suggestions and seize every opportunity for advancement and experimentation in the nutritional field. Her work will not become static.

For the compilation of a health record, practical and comprehensive, the nutritionist is asked to contribute the items essential to nutrition in the service. Here we are on virgin soil with but few if any precedents. A record is a tell-tale affair of more moment and greater importance than frequently regarded, yet in this case subject to change and development. Let us put our best judgment, our conscientious effort into the making, that we may proceed upon a substantial basis.

The complete functioning of nutrition in a Health Program is as yet

indefinitely defined. The opportunities and responsibilities of the nutritionist in such a position are so numerous and so closely related that only experience will enable her to realize and appreciate them to the fullest degree. At present her aim is to help promote that richness of life attained best by those who approach most nearly our ideal of normal human beings, physically, mentally, and socially. Her method is cooperation with other health workers in the development and execution of a health program which will incorporate as integral factors in that program, the principles of nutrition in their relation to health. To discover and perfect the details of the method for the accomplishment of the aim constitutes the work of the nutritionist in a Health Program.

BEDSIDE TEACHING OF STUDENT NURSES

HELEN J. HUBBELL

Yale University School of Nursing

The education of the student nurse looms large on the horizon of the nursing field today for with the transition from the apprenticeship system of nursing to an organized scheme of education comes the need for a fuller curriculum and more modern methods of teaching. With this changing point of view there is a keener realization of the importance of a thorough course in nutrition and dietetics. As better equipped teachers are available the value of a sound training in the principles of human nutrition and diet therapy is more apparent.

In all branches of professional education, the emphasis is being placed more and more on the direct application of theory to practice. Dr. Harvy Cushing expresses it from the angle of medical education as follows:

> We have gained much for science but have lost much for practice by the course we are following, and I look forward to a time when the pendulum will swing back, not to a day when the spirit of research will be any less active, but to a day when suitable representatives of the clinical departments will be delegated to correlate the teaching in the science courses so that their bearing on what is to come may be constantly kept in mind. A course in pure science unrelated to the patient belongs rather in the college than in the medical school.

Nursing education is attempting to make this correlation of theory and practice closer by giving the theory and classroom demonstrations of, let us say, the course in Medicine, during the period the student is on the medical service, and similarly for other services. Surely the student nurse can most successfully apply the principles of nutrition and dietetics learned in the classroom when she has a thorough knowledge of her patient and that can only be learned in the practice field, the ward.

During the pre-clinic or probationary term the student is accumulating a fund of interesting and useful information concerning the food needs of the body and food preparation, given in the forty-five hour

course in Nutrition and Cookery. Just as during this period she is getting practice by making beds and giving baths on the wards so it is possible for her to have some experience in serving diets on the wards by preparing breakfast and supper trays under close supervision. She is taking, during this time, courses in the basic sciences, such as Chemistry and Physiology. There is a course in the Economic and Social Aspects of Disease which gives a background for studying the health of patients in the community and the course in Methods of Case Study serves to emphasize the necessity of knowing the patients as individuals. It is not, however, until she finally reaches the ward that all this material can be so organized as to be of the greatest value to her in her service as a nurse. At the Yale University School of Nursing an attempt is being made to meet this problem by creating in the student a feeling of responsibility toward her patients as individuals and thus in her effort to serve each one most effectively she learns to use all her resources. If one is to think of the patient as a person one must have a knowledge of the social history, health habits and medical history, the social and medical diagnosis, the treatment and nursing care, and plans for discharge and follow-up; in all of which Nutrition takes its due place.

The first problem in nutrition and dietetics the student nurse meets on the ward is the serving of an attractive tray under the conditions found in the ward kitchen. She finds that each patient has a diet card, the color indicating the type of diet ordered by the doctor. On the cards of her particular patients she will indicate any special likes and dislikes, such as no sugar on cereal or in tea, milk warmed and eggs soft cooked. Such an interest in the individual diet will give the patient more confidence in the nurse. A special conference with the nutrition worker explaining the method of serving trays is held at the beginning of the ward duty. At that time the student is given general directions for the dietary care of her patients. She should know the diet order, how much the patient is eating, the types of food refused and any relationship between diet and the medical or surgical condition.

It is not sufficient that the student can serve a regular, soft or liquid tray so that it will be acceptable to the patient; she must also assume her rôle as teacher of good food habits. It is often difficult for a young student to know how to approach a patient; she feels that she is prying into private affairs. But a question regarding appetite, weight, or what the children like to eat usually will pave the way for the health instruction needed. If a nurse can make the patient feel her interest is

sincere there are but few persons who will not give her the information desired. When the student has obtained the necessary history then she can begin to remedy the dietary defects. Many patients have to learn to drink milk, to take an adequate amount of water or to eat vegetables. Most of them do not know what are included in the essentials of a well-balanced diet. If a patient is interested and sufficiently intelligent the student nurse gives him a simple outline which can be used as a guide in planning meals at home. This can be modified to suit the individual patient: possibly he is underweight, is gaining too rapidly or is constipated. Great care must be taken to adjust the diet to the financial status of the patient. Students are also urged to put health literature into the hands of their patients when an interest can be aroused.

The student, on each service, keeps a daily record of her experiences. The chief purposes of these experience records are:

1. To insure that students will gain an intelligent and sympathetic understanding of their patients and their needs (social, medical and nursing) in order that (1) the patients may receive the best possible nursing care, and (2) the students may acquire knowledge, skill, the power of keen observation, and the highest standards of nursing through a wise use of their practical experience.
2. To enable teachers to know what students are learning through this experience, to help them to give instructions and guidance when indicated and to place the use of the experience to the best advantage for both patients and students.

Diet and health teaching must be recorded if the student is to present her experience in full. The outline which follows is from a student's experience record. It records the important facts and observations regarding the diet and health teaching given a young patient of thirteen.

Experience record

Patient cared for. Boy of thirteen.

Medical diagnosis. April 18: (1) Chorea; (2) sinus arrhythmia.

Observations of symptoms and signs related to medical diagnosis. April 18: Patient extremely restless and nervous. Apparent lack of muscular control. Inability to use left hand. Poor appetite—constipation.

Family or social problems. April 15: Child somewhat retarded in school because of symptoms of present trouble which have been developing for sometime. Family feels financial burden of hospital care for the child, but is unwilling to accept assistance.

April 21: Patient presents a problem in discipline and in instruction in hygiene.

Nursing care; treatments, diets, teaching experience, etc. April 15: Complete morning

care. Apparently a good opportunity for general health education as well as a chance to attempt to aid the boy in overcoming his symptoms of extreme nervousness.

April 18: Morning care. Is being taught to drink more water with a view to helping him overcome the existing tendency toward constipation.

April 21: An effort is being made to teach proper care of teeth and especially to encourage the taking of a proper diet. Anticonstipation extras and fluids are being given and an attempt is being made to establish regularity of elimination. The patient is also being encouraged to use left hand and arm and to attempt to control nervous movements.

Observations of symptoms related to nursing care, treatments, diets, etc. April 15: Rather difficult to bathe child and make bed because of restless, uncontrolled motions of patient. Patient is very cheerful and coöperative.

April 18: Find that by encouraging the child he can be induced to take food better than formerly. Patient coöperative in taking fluids.

April 21: Have been quite successful in getting child to take foods for which he does not care.

If the nutrition worker is to be of greatest help to the student she, too, must know the patients. Conferences, sometimes on the ward and sometimes in the office, are frequently held when dietary problems can be discussed.

Monthly summaries of cases are required in the form of case studies. At least one, during the first three months, must be a study of a patient who offers some nutritional problem, such as an unbalanced diet, underweight or constipation. For such a patient the caloric intake is kept for several days. The case study which follows is not one which was especially written for the nutrition worker, but shows that in all studies consideration for diet must be shown and is an integral part of good nursing care.

Case study (lues of central nervous system)

I. History. a. Social. Mrs. X. was referred to the Hospital by the Nerve Clinic of the Dispensary who advised that a diagnostic lumbar puncture be made.

She is a small, but apparently well-nourished negro woman, of twenty-nine, who supports herself by working as a second maid, or a nurse maid, and supplements this by "entertaining"—singing and playing at negro gatherings.

She has no family responsibilities and on the other hand she has no immediate family to whom she may turn as this disease progresses farther and renders her unable to earn her own living. Her parents are both dead and she has no brothers or sisters. She was divorced from her husband in 1919, and has no children.

At present she lives in the family where she is working, having a room to herself and the use of the kitchen or other rooms during the day.

Mrs. X is known to the Nerve Clinic and to the Special Medical Clinic at the Dispensary, but the only plan they can make for her is to follow the case along and see that she gets institutional care if she reaches the stage where this becomes necessary.

b. Health habits. Mrs. X finished the first year of high school and had started on the second when she became ill with typhoid fever and fell behind her class. This worried her so, that the doctor advised that she be taken out of school, so her education has never been completed. She has, however, had enough, so that she is interested in keeping up with

everything that is happening, and spends much time reading newspapers, magazines and books. She also keeps up a voluminous correspondence, having written twenty-four letters in one week while in the hospital.

Her chief interest besides reading, is music, and she sings and plays the piano, and ukelele, and is very fond of dancing.

Mrs. X is particular about her person and her skin, hair and teeth are in good condition. She bathes nearly every day when at home, and washes her hair every two weeks. She brushes her teeth daily and goes to the dentist once a year or more often if necessary.

Her appetite is fairly good, but she is in the habit of having only two meals a day; a good dinner at noon, and a lunch at night. She does not like meat of any kind, but gets her protein by eating fish and eggs and drinking milk. She is very fond of fruit, especially oranges and takes this in preference to candies. She does not take tea or coffee. She drinks about three glasses of milk a day, and a great deal of water. Since she has been in the hospital, it has averaged about 3000 cc. a day for water. When she came to the hospital she weighed 109 pounds, which she says is about average for her.

Mrs. X is in the habit of sleeping about eight hours every night and of resting some nearly every afternoon. She sleeps well, and wakes up feeling rested the next morning. She is particularly fond of fresh air and always has her windows wide open.

The work which she does calls for one form of exercise and then she is a firm believer in her "daily dozen," which she says keep her supple, and limber for dancing.

Her eliminations are regular, without medicinal aid.

c. Medical history. In February, 1923, a diagnosis of syphilis of the central nervous system, was made at the Dispensary and the Wassermann Test made at that time showed 4+.

She was treated with neosalvarsan, as she had an idiosyncrasy for salvarsan, and was very regular in her treatments until she went south in May. She says she kept them up there until October, 1925.

In June, 1923, she had a nervous breakdown.

Symptoms. On February 8, 1926, she went to the Dispensary complaining of dizziness, a heavy feeling, lack of appetite, soreness in back of neck and severe headache. An impression of central nervous system lues was made and she was sent into the hospital for a diagnostic lumbar puncture.

This physical examination revealed nothing abnormal.

Diagnosis. a. Social. There is no immediate social problem, as Mrs. X is still able to work and support herself, but the nature of the disease points to the fact that in all probability there will be the problem of securing proper institutional care for her sometime in the future.

The medical diagnosis was referred for study at this time, but since then, an impression of luetic hepatitis, or of central nervous system lues has been made.

Treatment and nursing care. a. Medical. The doctors ordered complete rest, flat on her back in bed, liquid diet for the first day, after which she was put first on soft and then on regular diet.

b. Nursing. The nursing care involved taking the temperature, pulse and respirations every four hours, and the temperature presented a rather interesting and unusual picture, the reason for which could not seem to be explained.

Her teeth were in good condition and were brushed twice a day to keep them so.

Environment was a factor in this case, as rest was what was wanted, and the patient was placed in a side room where she could get more quiet and fresh air. She had a tendency to become hysterical, or was unable to stop laughing when once started, so that this also seemed a means of avoiding contact with many people who might excite her.

The nursing care included also, the mental side, bringing magazines to Mrs. X, and talking with her occasionally, for unless her mind was kept busy in some way she was apt to become despondent.

Finally, sometime was spent instructing Mrs. X on the question of a well-balanced diet and in pointing out to her the need of eating breakfast if she was to work all the morning. She said she thought this would be more easily done now as she had acquired the habit while in the hospital. She also seemed to appreciate the dietary suggestions and promised to try to work them out.

Progress and prognosis. While Mrs. X was in the hospital, the fever gradually subsided and she said she began to feel like herself again.

The prognosis is not good in a case of this sort. It will probably eventually involve either the brain and cause general paresis, or the spinal cord and cause tabes dorsalis.

On February 27 Mrs. X was discharged, and said she intended to finish her vacation with friends. She was referred back to the Out-Patient Department and her progress will be followed from there.

References consulted:

Mrs. X (the patient).
The Chart and Order Book.
Head Nurse—Special Medical Clinic.
Hazen: "Syphilis."

The discussion that has gone before relates entirely to those cases which do not present to the doctors and surgeons any special dietary problem. But it is rare, as you will no doubt concede, to find a case which doesn't offer, on special questioning, a need for health teaching.

After two or three months on the ward the student begins her study of metabolism cases through the care of these cases on the wards, the course of forty-five hours in Diet therapy and two weeks in the Diet Kitchen. The nursing care given metabolism cases includes the serving and charting of their diets and often assisting with the teaching of patients. This work is closely supervised by a metabolism worker, a nurse, who has not only formal conferences with the students, but sees them daily on the wards.

The diet kitchen experience is brief, but two weeks as compared to four to eight weeks in other hospitals. However, each step is planned with a view to giving the students as rich an experience as possible. It comes at about the time they are taking their Diet therapy course and usually when they are on the Medical Service. The student calculates from six to seven diets during that time. Each patient is visited before the diet is made and a second time if possible. These cases are written up in her experience record somewhat as follows:

Sample of experience record

Patient's Name. Mrs. X.

Date of admission.

Medical diagnosis. Diabetes mellitus; arteriosclerosis with heart disease; chronic gall bladder disease.

Observations of symptoms and signs related to diet. 1. Has a rather poor appetite and claims that she feels "overfed" here.

2. Mrs. X's temperature runs an irregular curve with the highest points at about 101 degrees.

3. She occasionally complains of nausea and has vomited once or twice.

4. Does not complain of diarrhea or constipation.

5. Has been on a diet for about 15 years and has very definite ideas about what is good for her, although she likes nearly everything, especially vegetables and custards.

6. Her intake of fluids averages about 4000 cc. a day and her output 3000 cc. She has complained of polyuria for sometime.

7. Cardiac condition shows soft systolic murmur and harsh diastolic murmur.

8. Urine showed V. F. T. Albumin: Sugar 4+: Blood sugar 222 mgm.: B. P. 174/80.

9. Weight: 154½ pounds.

Family or social problems affecting diet. 1. Mrs. X is financially able to carry out diet, but feels that she is not strong enough to get her own meals. She lives alone with her husband, whom she says can not even boil water, and she is rather worried as to how they will get on.

Diets, teaching experience, treatments, etc. 1. A diet of P. 60, F. 125, CHO 100, was prescribed to be given in three regular meals, and this is still being continued.

2. There is an opportunity here to teach Mrs. X to eat other types of food than she has been doing, which she will do if she is convinced of their value.

3. There has been an attempt to lower the blood sugar by the use of insulin. Otherwise rest, forcing fluids, and the proper proportions of diet have been the only treatments.

Number of times visited. Two.

Observations of symptoms related to efficacy of diet. 1. Since admission there has been a slight gain in weight, and she has been feeling stronger.

2. Blood sugar has increased to 243 mg., and she is now getting 15 units of insulin to keep her urine sugar free.

There is still a V. F. T. of albumin.

In the Diet therapy course special emphasis is laid on the planning and calculating of diets for specific ward cases. Sixteen hours of the course are allowed: part of the time being spent in visiting the patients and reading their histories; the rest being used by the instructor for conferences on the various cases. Diets are planned for patients with tuberculosis, hyperthyroidism, gastric ulcer, secondary anemia, diabetes and nephritis, using this outline:

Dietary case study

Age.
Height.
Weight.
Basal metabolism.
Energy expenditure.
Caloric requirement. Based on the preceding factors.
Diagnosis.
Complications affecting diet.
Diet order.
Individual needs. Such as: race, family food habits, likes and dislikes, appetite, mental outlook affecting diet, constipation, anemia, etc.

Family and social problems affecting diet. Economic and practical modifications and adaptations of the hospital diet to suit the home conditions and dietary habits of the household.

Diet problem. A summary of the above stating the important factors to be considered in making the diet.

There is no question but what the motivation of any course brings better results and in that of nutrition and dietetics is found a subject which lends itself most successfully to this project method.

The above program of nutrition and diet therapy is carried out while the students are on the Medical and Surgical wards. As they advance to the Pediatric service, the dietary problems of their patients are somewhat modified. In the children's wards, where the diet is carefully regulated by the doctors, the nurse's part is to develop in her small patients the right food and hygiene habits. It is not always enough to set before the child a well-balanced, attractively served tray and say "Eat your dinner." Each child presents an individual problem, so through the head nurse and the nutrition worker the student is guided in the handling of her particular patients.

Picture, if you will, a small round table at the end of the ward, with five to six youngsters of various ages with clean hands and faces and smoothly brushed hair. A nurse is serving the dinner of minced chicken, mashed potatoes, spinach, bread and butter, and milk. She then sits down with the group, helping a child of two and a half years to manage her spoon, suggesting that a bit of bread be used as a pusher rather than fingers, or reminding another that the twenty white horses need to be exercised. Public opinion is one of the biggest factors in putting across an idea. The nurse who makes the meal hour such a happy one that the youngsters are enthusiastic over having a "clean plate" has made good progress in the difficult art of training children.

The theory which parallels the practical work on the wards includes ten lectures by Dr. Arnold Gesell and his assistant, on child behavior. The students are fortunate in being able to spend two weeks in a Nursery School where they can study the behavior of the well child. The nutrition of the infant is taken up in the lectures given by a pediatrician and the general principles of feeding children are reviewed by the nutrition worker in one of the sessions of the Pediatric Nursing class. The Formula Room, too, offers an opportunity for the nutrition worker to continue her teaching. She instructs the new students in the Formula Room how to make up the feeding and holds a conference for each group at which are discussed the various ingredients used in the preparation of feedings and how they supply the babies' food requirements.

The obstetrical service also presents an excellent field for the teaching of the principles of good nutrition. Especially when the mothers are young, any new ideas which will make for better babies are eagerly accepted. It has been found satisfactory to give a general talk to all the patients on the ward about the diet for the nursing mother. Whenever possible the students are present at these talks. Then when a patient is discharged further diet instructions are given to the individual. As the mother always receives special instruction about the physical care of her baby so instruction about the mother's dietary habits must not be neglected if the baby is to develop normally.

There is no doubt but that we, as teachers of normal nutrition and diet therapy to student nurses, can help in the development of the new type of education for nurses. As Dean Goodrich said in an article on "The Nurse as a Teacher of Positive Health," "Whatever qualifications the nurse of the future may present as entitling her to work in the field of creative health, the nurse of today through her universal usage alone, is an important link in the chain. An increasing effort should be put forth to overcome the inhibiting aspects of present-day nursing education, that I have implied as widely existent, and to further a program of nursing education that will insure her (the nurse's) effective functioning to creative ends."

THE EXAMINATION OF STUDENT NURSES IN DIETETICS

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The chief aim of an examination is to determine the accuracy and extent of a student's knowledge and her ability to use that knowledge. In relation to dietetics this purpose is accomplished by examinations that will measure:

1. The student's range of general information in nutrition.
2. Her ability to compute problems involved in the calculation of a diet.
3. Her practical judgment.
4. Her ability to understand and carry out directions in the preparation of food.
5. Her ability to solve ordinary problems in the realm of dietetics.

The first three objectives can be realized by means of questions like the following:

The completion type question

1. Carbohydrates that can be absorbed directly into the blood stream without being digested are called ———.
2. The sugar found in milk is called ———.
3. The composition of milk is as follows: protein 3, fat 4, carbohydrate 5. The fuel value of 500 cc. is ——— calories.
4. If 200 grams of 20 per cent cream is prescribed in the diet, it will be necessary to buy ——— of milk.
5. Vegetables that are rich in iron are ——— and ——— but the minerals, calcium and phosphorus, are best supplied by ———.
6. A 5 per cent vegetable that can be substituted for spinach is ———.

The pertinent statement

(Write the most pertinent statement that you can make regarding each of the following.)

1. The diet of a nephritic patient with marked edema.
2. The emergency treatment of a patient suffering from hypoglycemia.
3. The corrective diet for constipation.

The true-false type

(If the statement is true, encircle the letter T. If it is false, encircle the letter F.)

1. Whey is an aqueous solution of carbohydrate. T F
2. Green vegetables should be boiled in a large amount of water. T F
3. The exclusion of one mineral salt may interfere with the absorption of the others. T F
4. In pregnancy a deficient diet will act more upon the child than upon the mother. T F
5. A diabetic patient is going on a journey. He can not get a meal at the usual time so he should omit his insulin. T F
6. Waterpacked fruit contains about one-half the carbohydrate of fresh fruit. T F

Single choice

(Place a cross (×) before the truest answer.)

1. The minimum protein requirement per kilo of body weight is:

—— 2 grams
—— $\frac{1}{8}$ gram
—— 1 gram
—— $\frac{1}{4}$ gram

2. If a limited supply of milk is available the person who shall have the prior claim is:

—— boy of 15 years
—— diabetic of 20 years
—— a pregnant woman
—— a man working 12 hours a day

3. Cellulose predominates in:

—— beef
—— grapes
—— potatoes
—— cabbage

4. The vitamin which is most resistant to heat (thermostability) is:

—— fat soluble A
—— water soluble B
—— water soluble C
—— fat soluble D

5. Dental caries is chiefly aggravated by the local:

—— putrefaction of protein
—— decomposition of carbohydrates
—— acidity of fruits
—— hard foods

6. The antiscorbutic vitamin is found to the greatest extent in:

—— cod liver oil
—— fresh lemon
—— bottled lime juice
—— whole wheat bread

Plural choice

(Underline the figures or words which make the truest answer.)

1. 100 grams of white bread contain approximately the following grams of carbohydrate, protein and fat:

Carbohydrate—40, 50, 60, 80.
Protein—1, 4, 6, 9.
Fat—1, 2, 9, 10.

2. 100 grams of lean meat contain approximately the following number of grams of carbohydrate, protein and fat:

Carbohydrate—0, 2, 5.
Protein—10, 15, 25.
Fat—3, 15, 30.

3. The following foods may be included in a purin-free diet:

Oranges, grapes, prunes, fish, cheese, meat, peas, lettuce, asparagus, coffee, postum, oatmeal, cream of wheat, meat soup, cream of corn soup.

4. To make a serving of beef juice several procedures are necessary. Select the necessary procedures and number them in the order you would proceed with the work.

—— Wipe clean ¼ pound lean beef.
—— Place in meat press and remove all juice.
—— Cook in small amount of water for ½ hour.
—— Heat over hot water before serving.
—— Wipe clean 1 pound lean beef.
—— Cut in inch pieces and sear on hot griddle.
—— Cook in 1 pint of water for one hour.
—— Heat over flame before serving.

5. Foods suitable for a child of five years are:

Milk, eggs, cheese, bacon, sausage, ice cream, doughnuts, jello, rice, pie, oatmeal, cream of wheat, bananas, oranges, apples, carrots, cabbage, fresh bread, toast.

6. To make mayonnaise dressing some of the following procedures are necessary. Select the necessary ones and number them in the order you would proceed with the work.

—— Beat the egg yolk.
—— Chill the ingredients.
—— Add the oil and vinegar drop by drop.
—— Keep in warm place.
—— Add salt, pepper and paprika if desired.

Pairing or matching terms

(Place the number of the word in the left-hand column before its equivalent in the right-hand column.)

1. Ketosis	—— contained in cheese.
2. Karell diet	—— usually present in gastric ulcer.
3. Gelatin	—— a monosaccharid.
4. Glycerol	—— lacking in tryptophane.
5. Polydipsia	—— incomplete combustion of fat.
6. Hyperchlorhydia	—— sometimes used for aneurysm.
7. Levulose	—— a symptom of diabetes mellitus.
8. Nucleoprotein	—— a constituent of fat.
9. Honey	—— present in sweet-bread.
10. Casein	—— a natural invert sugar.

Analogy form

(Underline the right word in the parentheses.)

1. Ptyalin is to the saliva as (pepsin, trypsin, rennin, amylopsin) is to the pancreatic juice.
2. Sucrase is to cane sugar as (lactase, intense heat, cold, yeast) is to starch.
3. Insulin is to hyperglycemia as (starvation, sugar, fat, water) is to hyperglycemia.

It has always seemed to the writer that the practice of requiring student nurses to memorize formulas was misdirected energy.

The time and energy that students spend in memorizing formulas and directions for preparing food, might be more profitably spent in learning

the principles of cookery and how to follow directions for the preparation of food. Formulas are available to everyone and our students are more efficient for knowing the best sources of information and how to carry out prescribed directions.

We determine a student's ability to understand and carry out directions in the preparation of food, by a practical test during a two-hour period in the dietetic laboratory. Each of the examinees draws a card on which is printed a recipe for preparing some dish that they have not previously prepared during laboratory class work. Following are examples of such cards:

1. Biscuits

1 C. sifted flour $\frac{1}{4}$ t. salt
2 t. baking powder 1 t. fat.

Sift flour, baking powder and salt together. Chop in fat with two knives. Moisten with milk, using a knife to mix. The dough should be as soft as can be handled. Handle as little as possible. Toss and pat down or roll out slightly on a slightly floured board until $\frac{3}{4}$ inch in thickness and cut into shape with a floured cutter. Bake in quick oven 12 to 15 minutes.

2. French omelet

1 egg
1 t. fat
1 T. milk, cream or water
$\frac{1}{8}$ t. salt, speck of pepper

Beat egg slightly; add liquid and seasonings. Melt fat in omelet pan; run over bottom of pan; pour in egg mixture. Cook slowly, pricking mixture with fork as it cooks on bottom so that uncooked portion on top may run down to bottom to be cooked. Avoid scrambled appearance. When of creamy consistency brown slightly on bottom, fold and turn into a hot platter.

If the students serve a luncheon at the end of their course in Nutrition, we require them to select their own formulas and to prepare all the food themselves. The luncheon, however, is not a part of the examination. For the fifth objective, that is, to test the students' ability to solve ordinary problems in the realm of dietetics, out-of-class examinations are given to determine their efficiency in using sources of information, in organizing material and applying the knowledge they have acquired. Following are examples of out-of-class examinations:

1. Prepare a report on experiments that have been made to demonstrate the effect of vitamins on health.

2. Plan the meals for one week for the following family: the father, an invalid suffering from paralysis; the mother who sews to support the family; a girl of fourteen; a boy of seven and one of five years. The allowance for food expenditure for one week is ten dollars. Write an explanation of approximately 300 words in support of your food selection.

3. A certain patient is allowed 50 grams of lean meat (weighed cooked) on his dinner menu. It is necessary to examine the patient's stools for blood. Calculate a substitute for the food value of the meat which will not interfere with laboratory test for blood in the stools.

4. A diabetic patient's final diet order calls for 100 grams of carbohydrate, 50 grams of protein and 150 grams of fat daily. While the patient is in the hospital his diet includes 200 grams of 20 per cent cream. The patient is unable to obtain cream at home. Plan a home diet for the patient, keeping the carbohydrate, protein and fat as given above, using foods that are available in the patient's home.

It may be observed that the so called "new-type" examination questions predominate over the conventional type. The main reasons for the preference are: first, the new-type permit the wide range of topics necessary to determine the extent of a student's knowledge; second, the completion-type of question, as well as the single-choice and plural-choice are highly valuable in testing accuracy; answers must be definite and precise and the examinee depends largely on his habits of exactness and accuracy; the pertinent-statement type calls for exercise of judgment, a sense of relative values, and ability to make terse statements; the analogy-form tests the student's knowledge of relationship—the manner in which things resemble each other and the manner in which they differ,—a test requiring a high degree of mental activity. A final advantage of the new-type questions is that the examinations papers can be more fairly graded because the personal equation of the reader is largely eliminated and the marking is more nearly mechanical.

The principal objections to this type of question are:

1. The questions are difficult to prepare.

2. There is a chance of guessing, especially in the true-false type. This disadvantage is greatly reduced when there are many questions and when an examination consists of questions of various types.

3. They do not test the student's ability to organize facts nor do they indicate his skill in language and composition. However, if we desire to have the student demonstrate these abilities, the out-of-class examination gives a better opportunity for his doing so than does the conventional type of examination question.

Much time and thought are needed for the preparation of the new-type questions. Many should be used and more than one type in a given subject. An examination of 50 true-false statements, 50 completion-type questions, 10 pertinent statements, 20 single-choice, 10 plural-choice, 50 matching-type, and 10 analogy-form questions, would enable one to cover a subject throughly and could be completed by an average student in about one hour. When skilfully prepared and used in connection with the out-of-class examination and the practical-procedure examination, they will efficiently determine the extent, the accuracy, and the usefulness of a student's knowledge.

TEACHING FOOD SELECTION TO PATIENTS[1]

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The time which the patient spends in the hospital should be utilized in learning how to improve his manner of living, so that errors which will further impair his health or prevent the restoration of health may be avoided. It is especially important to learn how to select food with wisdom, and systematic instruction should be offered in this subject. The necessity for education in food selection is not generally recognized. Every person accumulates experience by eating three meals a day and is likely to overestimate the value of this experience. Appetite is a safe guide only when unhampered by environment, food cost, or service, and even then it should be controlled by a mind which has a generous store of food facts. Let us master a few fundamental principles underlying normal nutrition and knowing these, let us read widely and from the best authorities before making radical departures from these principles.

It would be as hopeless to write one diet and expect it to meet the needs of all patients as it would be hopeless for a tailor to have one pattern, and cutting all coats over this pattern, expect them to fit his individual customers without alteration. But all coats have so much in common, that a tailor, master of his trade, may make garments to conform to the changing styles each year, and still be guided largely by his previous experience. The same principles apply to diet therapy. The patient with a foundation of normal diet standards, food values, and diet calculation, finds the selection of a therapeutic diet under the direction of a physician a task of unusual interest, rather than a burden.

In order to plan a therapeutic diet correctly we must keep in mind the standards of a normal diet. When a housewife takes a loaf of bread to the county fair, she submits it to the association, knowing that it will be scored and credited according to the standards accepted by the association. So the patient selecting food which will satisfy requirements imposed by his physician will find a diet score card helpful in planning diets which will win the prize of health.

[1] [*Editor's note:* The papers on Teaching Food Selection to Patients and the Relation of the Diet to Nephritis and Hypertension are taken from a series of lectures given to patients in the Division of Medicine of the Mayo Clinic at St. Mary's Hospital.]

DIET SCORE CARD[2]

1. The fuel value of the diet must be sufficient to maintain normal weight.
2. The proteins of the diet must be adequate for growth.
3. A careful balance must be maintained between the food elements.
4. The residue or bulk of the diet must be sufficient to produce normal bowel movement.
5. The mineral salts must be sufficient for body needs.
6. The diet must contain an abundant supply of vitamins.
7. The food served must be palatable, available, and suitable to the dietary habits of the individual.

The first requirement of the normal diet is that it shall contain sufficient calories to maintain normal weight. In discussing foods and diet therapy we should learn to speak and think in terms of food values. When we all recognize the importance of food in the development of the individual we will study food values as industriously as we now study money values. We need to become acquainted with the language of the food chemist and apply it to our three meals a day.

The careful weighing or measuring of food is of the utmost importance in dietary treatment. The metric system has been adopted for weighing food because of its convenence. The density of liquids used for food varies so little that liquids may either be weighed or measured, using 1 gram as equivalent to 1 cubic centimeter. Convenient and accurate scales are on the market. A child may be taught to use them.

Food furnishes energy to do work and heat to keep the body warm. Food furnishes building material for the muscles, bones, and body fluids. There are three classes of foods: carbohydrates, proteins, and fats. Carbohydrates and fats are sources of heat and energy. Proteins supply building material for the body. Sugars and starches are practically pure carbohydrates. Cereals and breads are largely carbohydrate in the form of starch. Gelatine and dried egg white are essentially pure protein. Meat, eggs, cheese, and milk also contain protein in combination with varying amounts of carbohydrates and fats. Salad oils of all kinds are essentially pure fat. Butter, mayonnaise, and the cooked fats of meats contain a high percentage of fat.

The energy or fuel value of food is measured by the heat unit called the calorie. A calorie is the amount of heat necessary to raise the tem-

[2] The Normal Diet, Including a Diet Score Card, Florence H. Smith, The American Journal of Nursing, January, 1926.

perature of approximately 1 quart or 1000 grams of water 1°C. The calorie value of food is determined by measuring the increase in the amount of heat given off from the body after eating a known quantity of the food in question. One gram of carbohydrate yields 4 calories of heat. One gram of protein yields 4 calories of heat. One gram of fat yields 9 calories of heat. A dairyman once gave us an optimal ratio for the carbohydrate and protein in the diet for his cows. He weighed the grain for them carefully, yet he was quite amused when it was suggested to him that his own food should be proportioned with equal care. How many mothers responsible for the feeding of their families know food values and diet adjustment?

We have said that the first requirement in the diet shall be sufficient calories to maintain the body at normal weight. When the patient is in the hospital it is a relatively simple matter to get an estimate of the number of calories in his diet. In order to calculate the calorie intake of an individual it is necessary to know the kind and amount of food served. With this information and a table of food values at hand to show the composition of the foods, the person responsible for calculating the fuel value of the diet is ready for work.

Outside the hospital the task is more difficult unless the diet is served in standard portions and the patient has been taught some of the fundamentals of dietetics. For example, the underweight patient who has been urged to eat will invariably insist that she "eats a lot," while the overweight patient when advised to reduce her calories, will tell you just as emphatically that she eats "scarcely anything." Yet those who have weighed and calculated diets know that it is the exception for an underweight patient to be eating a sufficient diet and that it is just as true, usually, that the obese have been eating excessively. For this reason, it is often necessary to teach the patient to calculate the food value of what he has been accustomed to eat, thus winning his intelligent coöperation and safeguarding him against the advice of well-meaning friends. It is the principles of the normal diet in which we are now interested, for the calculating of the total grams of carbohydrate, protein, and fat in the food eaten by the patient is a simple process that can be mastered in a few hours spent with the text and reference books which are now available.[3]

The best automobile will not run without gasoline, just so, no matter

[3] Feeding the Family, Mary S. Rose. American Food Products, Bulletin No. 28, U. S. Department of Agriculture, Washington, D. C. Food Values. Edwin A. Locke. Laboratory Handbook for Dietetics, Mary S. Rose.

how perfect our bodies, we must not expect them to function properly without fuel, but because the matter of calories is given first place in the diet let us not forget that there are at least six other important factors to watch, which may be easily lost sight of if the attention is focused too closely on the question of calories.

The question of protein: We know from our study of foods that each class of foods has a particular function to perform. Carbohydrates (or starches and sugars) furnish heat to the body. Fat also furnishes heat, but on account of its chemical composition it produces two and a fourth times more heat in the body than does carbohydrate food. Protein, which we find plentifully in meat, eggs, milk, and cheese, has the same fuel value as carbohydrate. But the matter of diet adjustment is complicated by the fact that food has other functions than to produce heat or energy. Body tissues must be built and repaired. *Protein is chiefly important in nutrition because it supplies elements for the building of body tissues.* Therefore, in writing a diet we will take care to supply a sufficient amount of protein. There are very accurate laboratory methods for determining the amounts of protein required in the diet of the individual, but these methods are not available to all. A safe test for an adequate amount of protein is a satisfactory growth and the maintenance of normal weight. A few minutes study of any table of food composition will enable us to select that type of protein food which is most acceptable to us. For example, a diet need not contain meat in order to have an adequate protein supply. The vegetarian's diet permits the use of eggs, milk, and cheese, all of which are rich in protein of the right composition for body use.

The normal diet should maintain a balance between its various food elements. *The individual should be temperate in all food habits. Excessive amounts of food, whether of carbohydrate, protein, or fat, are to be avoided.*

The remaining factors necessary to the normal diet may be considered in any order one desires. It has always seemed logical to consider next the question of sufficient bulk or residue in the diet, because with sufficient residue supplied by fruits and vegetables,we find the remaining necessary factors usually adequate. *For the normal individual, the bulk in the diet is sufficient only when it contains enough non-digestible residue to form a normal bowel movement daily.*

When serving weighed diets to any group of patients it is necessary to write into the diet approximately 800 grams of fruits or vegetables to produce a normal bowel movement daily, if the carbohydrates, proteins, and fats of the diets are held within the accepted normal limits. When

the bulk of fruits and vegetables is dropped to 600 grams, it will result in many complaints from constipation. It is necessary to encourage patients to wait a sufficient time for normal bowel movement to form before declaring the diet a failure. The food taken on any single day should

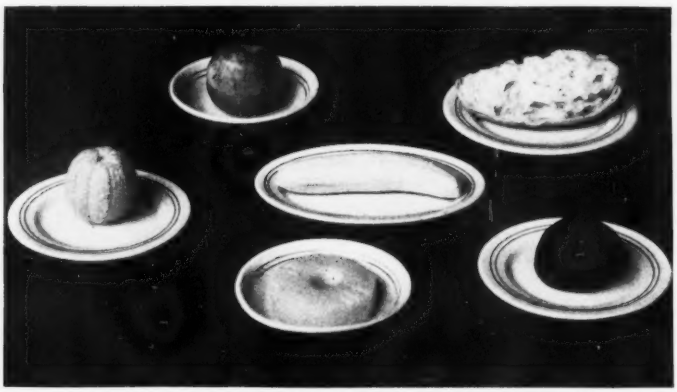

Fig. 1

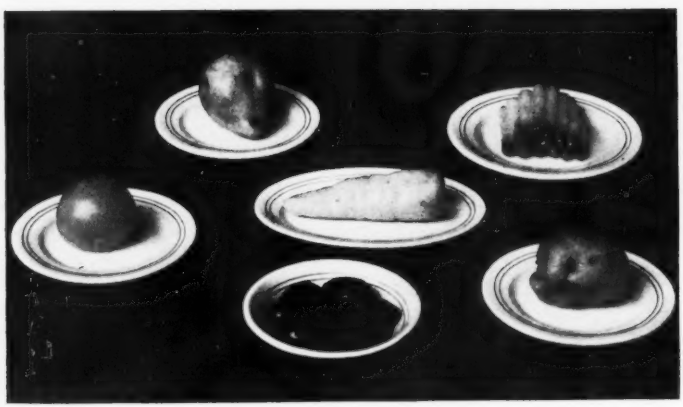

Fig. 2

normally furnish the material for the bowel movement of the third or fourth day. If the patient follows the diet consistently, he will find that after a time he can safely reduce the quantity of bulk if it still seems a burden. We hesitate to advise this, ever, unless the bowels move too fre-

quently and the stools become mushy or liquid, because of the valuable qualities, other than bulk, which a diet rich in fruit and vegetables affords. By no means do we favor the omission of other necessary factors, such as eggs, milk, meat, etc.

Figures 1 and 2 are photographs of wax models of fruits and vegetables. Each portion weighs 100 grams. These models are a part of our educational exhibit used in teaching standard portions and food values.

The mineral content of the diet should be sufficient. Perhaps this is the best argument in favor of the use of fruits and vegetables. A diet containing fruit and vegetables enough to produce residue to avoid constipation, plus protein for normal growth and additional fuel foods to produce normal weight, will furnish an adequate supply of mineral salts.

There should be a sufficient amount of vitamins in the diet. We read in scientific magazines, in popular magazines, and in the street cars, of the value of this food accessory, the vitamin, but because this very important thing has been thus widely advertised we are likely to look upon it as a fad or passing fancy. This is not the case, because these dietary factors play an important part in the life of the individual and the development of the race. We hear them overemphasized just now, because they are comparatively new. We are especially fortunate in living in a country where there is a wide variety of fruits and vegetables and dairy products available. Vitamin deficiency often develops in locations where the choice of food supplies is limited, or in individual cases, where through lack of education in proper food habits, the patient has limited himself to a very narrow variety of foods. A diet containing eggs, butter, milk, vegetables, and fruits is the safeguard needed against disease due to vitamin deficiencies.

THE RELATION OF THE DIET TO NEPHRITIS AND HYPERTENSION[1]

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Division of Medicine, Mayo Clinic

In a preceding paper[2] the selection of food in general and the principles involved in building up any normal maintenance diet were considered. These same general principles guide us in planning diets for patients with nephritis, but there are other factors to be considered. In the past many persons, including certain physicians, have been inclined to regard albuminuria, particularly if associated with increase in blood pressure, as diagnostic of Bright's disease. The patients, in such cases, have been given unfavorable prognoses and have frequently been placed on a milk diet, or at least on a diet containing a large amount of milk.

The presence of albumin in the urine should always receive serious consideration, especially if the blood pressure is elevated. Bright's disease may or may not be present. It is the physician's duty to make an accurate diagnosis, and to distinguish between the relatively harmless form of albuminuria and the more serious form. This requires careful study of the urine and blood pressure, a complete investigation, particularly of the heart and blood vessels of the body in general, and of the retina of the eye. Investigation for evidence of dropsy or anemia should also be made. Even with all this data it is usually necessary to employ various tests of renal function, such as examination of certain chemical constituents of the blood, and the ability of the kidney to eliminate certain dyes, salt, or water. The power of the kidney to pass concentrated urine if the patient is on a diet low in fluid content and likewise its ability to excrete dilute urine after large quantities of water have been ingested is also a most important diagnostic point. With such data at hand it is usually possible for the physician to make an accurate diagnosis and to plan rational treatment. In many cases of nephritis a milk diet is not sufficient. Frequently the kidney is unable to handle properly proteins, salts, or water individually or in combination. Therefore, if enough milk

[1] First reported in the January, 1927, issue of the Hospital Progress.

[2] Food selection for the Hospital Patient, Florence H. Smith, Hospital Progress, December, 1926.

is given to supply the calories required, too much protein, salt, and water are also given.

In this paper the term "nephritis" is used in its broadest sense, and no attempt is made to differentiate the different types of degenerative, vascular, and inflammatory disease of the kidney. From the patient's standpoint it is necessary only to regard nephritis as a condition in which one or more of the functions of the kidney are impaired; the diet is planned to spare, so far as possible, the injured kidney and to avoid over-strain on its excretory function. As a rule, the protein content of the nephritic diet is reduced since most protein decomposition products are excreted through the kidney; but less than 40 grams a day is rarely given because the body requires about this amount to prevent destruction of tissue. Water is ordinarily not restricted unless there is edema, but salt is kept at a low level. If there is retention of protein derivatives, such as urea, large amounts of fluid are usually given with the food in order to wash out these poisonous substances.

Patients with hypertension, even though they may not have nephritis, are usually given food which is relatively low in protein, salts, condiments, extracts, and all irritants. The exact cause of hypertension and its relation to diet has not been definitely determined, but it seems advisable to spare the kidney and arterial system from as much work and irritation as possible, and to encourage temperance in eating. The diets for these patients conform to all the rules of a normal diet and should be followed as closely as possible.

SELECTION OF FOOD FOR NEPHRITIC PATIENTS

Often when a patient with nephritis enters the hospital he is placed on a diet which is calculated to meet the requirements of the average individual at rest in bed. This diet contains approximately 40 grams of protein, 1500 calories, between 1200 and 1400 grams of water in the food, and 7 to 8 grams of salt. It is estimated that there are 2 grams of salt naturally in the food and approximately 5 grams are added during preparation. No extra salt or pepper is allowed on the tray. No other seasonings or condiments are used except a small amount of vinegar. Additional fluids up to 1200 cc. are allowed unless otherwise ordered. As the calorie requirement and the ability of the patient to use protein food is determined, the diet is adjusted by the physician to meet the patient's requirements. Protein is added in any form desired and the calories adjusted by the addition or subtraction of carbohydrate or fat.

The importance of vegetables in the diet cannot be over-emphasized. Canned vegetables are available in all parts of the United States and Canada. These are wholesome and palatable and should be used freely when fresh vegetables are not available. It is not necessary to purchase special brands of canned vegetables. A brand suitable for use by the family is preferable. Home canning is a desirable and economical method of preserving many foods by means of which their use is distributed over seasons and in localities where they are not available fresh. There is no question that to most people fresh fruits and vegetables are more palatable than the canned product. The family should eat plentifully of the fresh fruits and vegetables in season, not cutting down on their use in order to have a supply to can. Provisions for canning should be made whenever possible by planting gardens to yield a succession of fresh vegetables for daily use and a surplus for canning. The valuable mineral and vitamin content of fresh food is not lost if proper methods of canning are employed. Other methods of perservation should be considered before canning is done. Certain root vegetables as beets, carrots, turnips, squash, and pumpkin, may be stored in cellars for winter use. It is often helpful to can some of these winter vegetables during the summer when they are young and tender. These may be used in the early spring when the stored vegetables have lost their fresh flavor. If fruits and vegetables have to be purchased for canning the cost should be compared with commercially canned goods and fresh products out of season to determine the advisability of home canning. Full information regarding the canning of fruits and vegetables at home may be obtained from the United States Department of Agriculture, Farmers' Bulletin Documents, Government Printing Office, Washington, D. C., at 5 cents a copy. If the diet is ordered salt-free, vegetables canned without salt may be purchased through your home grocer. When these are not available, fresh vegetables should be used if possible.

Fruits, fresh, or canned, are often advised instead of made desserts. These are particularly helpful in combating hunger when the caloric intake is low, and in cases of constipation when additional bulk is required.

The choice of bread is unlimited for the nephritic patient. Breads made from whole grains contain more mineral salts than the highly milled products. But if fruits and vegetables are used plentifully it is not necessary to use whole wheat bread exclusively. White bread, rye bread, graham bread, and corn bread are all wholesome foods.

Butter and butter substitutes may be used as allowed on the diet.

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Butter and butter substitutes may be used as allowed on the diet.

A standard butter cutter cuts a pound of butter into forty-eight squares. Each square contains approximately 10 grams of butter. If the food is to be served without salt, the salt may be washed from the butter, or sweet butter used.

Bacon may be used by the nephritic patient unless the diet is ordered salt-free. Bacon contains a relatively low amount of protein and a large amount of fat. Eggs contain protein and should be used as specified on the diet order. So far as we know red meats are no more harmful to the nephritic patient than white meats if equal amounts are used. It is the quantity of protein food rather than the quality that is limited for the nephritic patient. Meat, soup, broth, and gravy should be omitted as they contain meat extractives in concentrated form. Twenty per cent cream is sold on the market as coffee cream, and may be purchased from the dairy or skimmed from milk which has stood in a favorable temperature for twelve hours or more. Forty per cent cream is sold on the market as whipping or heavy cream. Mayonnaise dressing made by any standard recipe is approximately 85 per cent fat. The traces of carbohydrate and protein in this may be disregarded. Either lemon or vinegar may be used in making salad dressings. Milk is valuable food for the young and should be used in all diets when the protein and fluids allowed are sufficient. Cereal is a valuable food when the amount of carbohydrate in the diet exceeds the amount necessary for vegetables, fruits, and cream. When the diet is ordered salt-free prepared cereals containing salt must be avoided.

It is difficult for the average patient to use many of the recipes of calculated food value when a diet order must be followed. A wide variety of simple foods, well cooked and nicely served, will prove more satisfactory. If the use of coffee, tea, and cocoa is prohibited many patients learn to enjoy Kaffee Hag. Directions for making coffee are followed in preparing this beverage. Postum may be used if desired. Vinegar may be used in reasonable amounts. Spices such as pepper, mustard, et cetera, should be used sparingly, if at all. The amount of salt and water allowed will be prescribed by the physician in charge.

HOW THE DIET IS PLANNED

Much of the drudgery of planning and calculating the diet for each day is eliminated if a simple plan of selection is followed. The physician designates the amount of carbohydrate, protein, and fat allowed in the diet. In doing this he covers the first three points of our diet score card.[1]

It remains then for the dietitian and the patient to plan a diet which will hold all other factors of the diet normal. This is done by using a foundation diet as a basis for the daily three meals.

A FOUNDATION DIET (FIG. 1)

Each day's menu:

Two servings (200 grams) of 5 per cent vegetables
Two servings (200 grams) of 10 per cent vegetables
One serving (100 grams) of 10 per cent fruit
Two servings (200 grams) of 15 per cent fruit
One serving (100 grams) of 20 per cent fruit
Three slices (60 grams) of bread
One serving (100 grams) of potato
One serving (20 grams dry weight) of cereal

Fig. 1

There are approximately 20 grams of protein in the foundation diet. The amounts of carbohydrate it contains vary with the kinds of fruits and vegetables selected. If the calories prescribed are low the leafy vegetables of low carbohydrate values may be used. This food may be divided among the three meals in any way the patient desires provided all the food is consumed within the twenty-four hours.

To build a 40-gram protein, 1500-calorie diet with this foundation diet the following foods may be added for breakfast, dinner, and supper:

Breakfast

One egg (50 grams)
One-fourth glass (60 grams) cream, 20 per cent
One-half square (5 grams) butter

Dinner

One serving (100 grams) of 20 per cent fruit
One cup (200 grams) of cream soup
One-eighth glass (20 grams) of 20 per cent cream
One square (10 grams) of butter

Supper

Two tablespoonsful (30 grams) of cream sauce
One square (10 grams) of butter
One-eighth glass (20 grams) of 20 per cent cream

Written in the form of a menu for a day the diet which contains 40 grams of protein and 1500 calories appears as follows:

Breakfast (fig. 2[3])

One orange (medium size)
One serving of cornflakes
One Egg
One slice of toast
One-half square of butter
One-fourth glass of 20 per cent cream

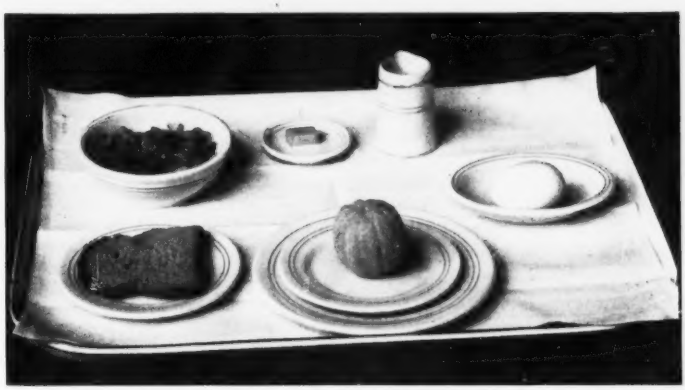

Fig. 2

Dinner (fig. 3)

One lamb chop
One serving of potato
One serving of tomato
One serving of beets

[3] These illustrations are photographs of wax models from our educational exhibit. These models are used in teaching standard portions and food values.

One asparagus salad
One banana
One slice of bread
One square of butter
One-eighth glass of 20 per cent cream

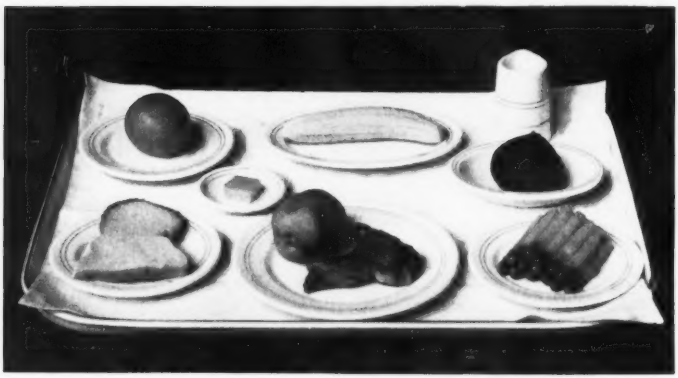

Fig. 3

Supper (fig. 4)

One serving of creamed carrots
One lettuce and apple salad
One serving of stewed prunes
One slice of bread
One square of butter
One-eighth glass of 20 per cent cream

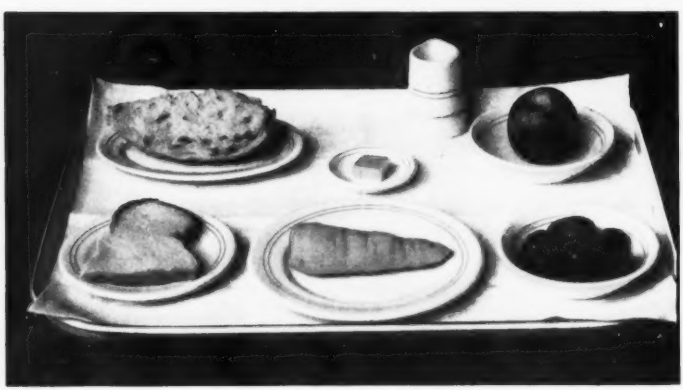

Fig. 4

Daily menus planned for the patient are of doubtful value because the food selected is often not available at the time indicated. It is, therefore, important that the patient should learn to substitute one food for another of equal value, thus keeping his diet constant and avoiding the monotony that results from following a diet prescription if a knowledge of food values is lacking. The following list may be helpful in selecting foods for a diet which contains 40 grams of protein. These protein foods should be used as additions to the foundation diet which contains approximately 20 grams of protein.

PROTEIN FOODS IN A DIET CONTAINING 40-GRAM OF PROTEIN

DAY	BREAKFAST	DINNER	SUPPER
Sunday	Bacon	Vegetable soup	Chicken
Monday	Bacon	Vegetable soup	Two chops
Tuesday	Egg	Cream soup	
Wednesday	Bacon	Small steak	Vegetable soup
Thursday	Egg	Vegetable soup	Ice cream
Friday	Egg	Fish	Pea soup
Saturday	Bacon	Cream soup	

Vegetable soup, with vegetable stock as a basis rather than a meat stock, may be used whenever desired. It is a pleasant addition to a meatless meal. All meat soup, broth, and gravy should be avoided as these contain meat extractives in concentrated form.

FRUITS AND VEGETABLES IN A DIET CONTAINING 40-GRAM PROTEIN

Besides the eight servings (800 grams) of fruits and vegetables used as a basis for the diet, potato or potato substitutes, such as rice, macaroni, spaghetti, corn or hominy, are allowed once a day. Lima beans, navy beans, and baked beans should be avoided unless protein in some other form is subtracted. Green peas may be used but only one-half serving, as peas contain considerable protein. Vegetables should be selected from either the 5 or 10 per cent group. One vegetable may be creamed each day. Salads may be served twice each day. These may be made of fruit or vegetable or a combination of both. If a cooked salad dressing is used the food value may be disregarded.

DESSERTS IN A DIET CONTAINING 40 GRAMS OF PROTEIN

The dessert should be fruit of which a wide choice is allowed. Fresh fruits should be used whenever possible, but dried and canned fruits are

permissible. All rich desserts and pastries should be avoided. Simple fruit puddings containing not more than 2 grams of protein may be used. The following are examples: Fruit jello, fruit tapico, escalloped fruits, as apple betty, rice with fruit, fruit ices, fruit whips.

BREAD AND CEREALS IN A DIET CONTAINING 40 GRAMS OF PROTEIN

The bread may be white, whole wheat, rye, or graham. The amount is limited to one slice each meal. A roll or biscuit of the same size may be taken in place of a slice of bread. Breakfast cereals of all kinds may be used. The food value of a serving of cereal, one potato, and a slice of bread is approximately the same. They may, therefore, be substituted one for the other. A list of substitutes for one slice (20 grams) of bread. is given elsewhere in this paper.

BEVERAGES

Coffee, tea, cocoa, and chocolate must be avoided. Postum or Kaffee Hag may be used as beverages. Sugar (not to exceed two lumps) may be used for the beverage. One teaspoonful of sugar is allowed for the cereal.

DIET SUBSTITUTIONS

Carbohydrate equivalent. It is important that the fuel value of the diet be kept constant. The substitution of one form of carbohydrate food for another is often necessary. The following tabulations will serve as a guide when substitutes are needed.

SUBSTITUTES FOR ONE SLICE (20 GRAMS) OF WHITE BREAD

Three servings (300 grams) of 5 per cent vegetable
One and two-thirds servings (166 grams) of 10 per cent vegetable
One-half serving (50 grams) of 20 per cent vegetable
One serving (100 grams) of 10 per cent fruit
Two-thirds serving (66 grams) of 15 per cent fruit
One-half serving (50 grams) of 20 per cent fruit
One-half serving (12 grams) of dry cereal
One slice (20 grams) of rye bread
One slice (20 grams) of whole wheat bread

PROTEIN EQUIVALENTS

Variety is added by occasionally substituting meat or other food having a food value of 6 grams of protein and 6 grams of fat, when an egg is allowed in the diet.

SUBSTITUTES FOR ONE EGG

One inch cube (25 grams) of American cream cheese
One glass (200 grams) of milk
One cup (200 grams) of cream soup
One serving (100 grams) of ice cream
One serving (100 grams) of custard
One serving (25 grams) of lamb chop (lean meat)
One serving (33 grams) of boiled ham

The following foods contain varying amounts of carbohydrate and fat. (See figure 5.) The protein in the servings indicated equals the protein in one egg. The carbohydrate may be disregarded but the fat should be adjusted by omitting butter from the diet as indicated:

Twenty almonds (30 grams) deduct two squares of butter
Six Brazil nuts (36 grams) deduct two and one-half squares of butter
Eighteen halves of English walnuts (37 grams) deduct two and one-half squares of butter
Three-fourths ounce butternuts (23 grams) deduct two and one-half squares of butter
Twenty pecans (60 grams) deduct five squares of butter.
One ounce hickory nuts (35 grams) deduct two and one-half squares of butter
Forty filberts (40 grams) deduct two and one-half squares of butter

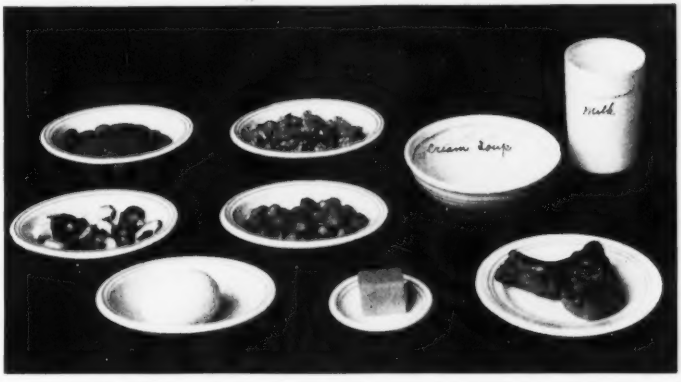

Fig. 5

It is often convenient and sometimes necessary to use substitutes for butter in the diet. The following is suggested:

SUBSTITUTES FOR ONE SQUARE (10 GRAMS) OF BUTTER

Two teaspoonsful (9 grams) of salad oil
Two teaspoonsful (12 grams) of mayonnaise
One and one-half strips (15 grams) of bacon

Two tablespoonsful (25 grams) of 40 per cent cream
One-fourth glass (50 grams) of 20 per cent cream

The patient is advised to keep a record of the food served to him at the hospital. These diets together with the instructions given by physicians, dietitians, and nurses will enable the patient to continue the diet after he leaves the hospital.

THE THERAPEUTIC USE OF DIETS LOW IN WATER AND IN MINERAL CONTENT[1]

NORMAN M. KEITH, M.D., FLORENCE H. SMITH, B.S., AND MARY WHELAN, M.A.

Rochester, Minnesota

The importance of a diet low in chlorides for certain cases of nephritic edema was demonstrated by Widal[2] in 1903. In his cases chlorides were readily retained, but equal retention of water was not shown. The ingestion of a diet low in chlorides was followed by diuresis and loss of edema. In our experience, in cases of obstinate edema due to renal disease inability to excrete both chlorides and water usually was manifested and thus the so-called salt-free diet failed to produce diuresis and loss of edema. While considering possible dietetic reasons for this failure, we found by analysis that our salt-free diet contained a small quantity of chloride, from 2 to 3 grams, but from 1200 to 1400 cc. of water. This amount of water when added to that ingested as fluid, from 600 to 1000 cc., made the daily intake from 1800 to 2400 cc. In revising the diet we hoped (1) to decrease the water contained; (2) to reduce the amount of sodium, since sodium retention has been shown to be associated with water retention, and (3) so to control the diet that this minimal content of water and mineral would be, for practical purposes, the same from day to day. Such a diet has been used in the wards of St. Mary's Hospital for the last three years and has proved a most effective adjunct in the treatment not only of cases of obstinate edema due to nephritis but also of those of persistent ascites due to hepatic and cardiac disease.

In the past three years 165 cases have been treated. Out of this group there are 10 cases which have reported back to this service, for reconsideration of their conditions. In the interim between admissions these patients had all been able to adhere quite rigidly to the diet at home. Examinations showed definite improvement in their conditions.

Two cases out of this group are especially interesting and deserve more

[1] From the Division of Medicine, Mayo Clinic.

First reported in the Archives of Internal Medicine, April, 1926, vol. 37, pp. 550–558. Copyright, 1926, American Medical Association, 535 North Dearborn Street, Chicago, Ill.

[2] Widal, F., and Javal, A.: La cure de déchlorination; son action sur l'oedème, sur l'hydratation et sur l'albuminurie à certaines périodes de la néphrite épithèliale, Bull. et mém. Soc. méd. d. hôp. de Paris **20:** 733–749, 1903.

consideration. One of these is a young woman with tuberculosis polyserositis who was first admitted June, 1925. This patient was placed on the low salt, low water diet and had adhered to it rigidly until October, 1926, when she seemed to be well and strong and with the aid of some ammonium nitrate as a diuretic had remained practically free from edema and ascites. She had reported back to this Clinic twice between June, 1925, and October, 1926.

Case no. 2 is a young woman with a very definite chronic nephrosis, who has been on the diet since her first admission to the hospital in February, 1924, to the present time. This patient lives near this city and has been under our close observation. She is able to carry on her work with comparative comfort and has been able to follow the instructions given her regarding her diet. She plans, prepares, weighs, and serves her own meals and finds them palatable and satisfying. It is of interest to note that on her first admission, her blood fat and cholesterol values were very high. These have assumed normal values at later admissions. In both of these cases cited it was a common observation on the part of the patient that a slight infringement on the diet or an increase in fluids was followed by increased edema. This tendency has lessened with control of the edema over a long period.

The object of this paper is to show that the administration of such a diet is a useful therapeutic measure, that important quantitative data can be obtained thus and that after its continuation for several years there is no apparent evidence of diet deficiency.

COMPOSITION OF THE DIETS

Type of food. When a patient with nephritis enters the hospital he is often placed on a diet calculated to meet the basal requirements of the average adult. Such a diet contains 40 grams of protein and 1500 calories. Basal diets for patients with nephritis in the department of medicine at St. Mary's Hospital are planned on foundation diet containing 800 grams of fruits and vegetables, 60 grams of bread, 100 grams of potatoes, and 20 grams of dry cereal. This basis contains approximately 20 grams of protein. To this is added food containing complete proteins to make up the required 40 grams and carbohydrates and fats to produce 1500 calories. These diets contain between 1200 and 1400 grams of water as calculated from the percentage composition of water in the foods served. Diet 1, table 1, shows the mineral content of the basal diet for patients with nephritis. This is our salt-free diet. To make it

more palatable for patients who have nephritis without edema, 5 grams of extra salt is added during the process of preparation.

Because these diets contained considerably more water than we had anticipated, they were first modified by lowering the water content of the food. Eight hundred grams of water was the standard accepted. Foods with a low water content were selected and a diet formulated which contained 40 grams of protein, 1500 calories. Later the mineral content of the food was calculated. It was found to be rather uniformly low in all mineral salts except those of potassium. This was high, as potato had been used in generous amounts because of its high carbohydrate content. Rice or macaroni was then substituted for the potato in the diet, and the potassium content was reduced considerably (diet 2, table 1). Macaroni and rice served without salt are usually unpalatable to the patient.

TABLE 1

Composition of the diet

DIET	CARBOHYDRATE	PROTEIN	FAT	CALORIES	WATER	SODIUM	POTASSIUM	CALCIUM	MAGNESIUM	CHLORINE	PHOSPHORUS	SULPHUR	IRON
	grams	*grams*	*grams*		*cc.*	*grams*	*grams*	*gram*	*gram*	*gram*	*gram*	*gram*	*gram*
1	189	37	65	1,531	1,286	1.156	3.745	0.807	0.312	1.585	0.991	0.736	0.013
2	148	40	80	1,515	809	0.507	1.625	0.225	0.196	0.668	0.657	0.562	0.009
3	243	40	92	2,016	834	0.528	1.637	0.328	0.212	0.693	0.666	0.569	0.009
4	175	50	126	2,094	872	0.747	1.772	0.292	0.208	0.867	0.741	0.692	0.011
5	235	50	144	2,508	895	0.770	1.872	0.307	0.223	0.888	0.751	0.700	0.011
6	301	60	164	3,005	932	0.842	2.848	0.280	0.206	0.870	0.931	0.814	~~0.157~~ 0.015

In these cases potatoes may be substituted for rice without affecting the results from the diet. This was done in diet 6, table 1, as shown by its higher potassium content. This diet contains 600 grams of fruits and vegetables. No evidence of deficiency of mineral or vitamin has been recognized in patients who have been on this diet for several months. In selecting foods to fill the diet prescription we made an attempt to secure foods that would be available for a long period of time in order that the diet might be held constant. Fresh fruits and vegetables were used whenever possible. At least 400 grams of the amount allowed was served as fresh fruit and green vegetables. Orange, grapefruit, banana, lettuce, tomato and string beans were used. Canned tomatoes and canned string beans also were used, standard brands having been selected for analysis. All food was prepared and served without extra salt.

The foods served were weighed and the uneaten portions were reweighed. A permanent record of the diet actually eaten was calculated and charted. The actual fluid ingested over and above that in the food was from 600 to 800 cc. daily, making the total fluid intake from 1400 to 1600 cc.

After the caloric requirement and the ability of the patient to use protein food had been determined, the diet was adjusted to meet the actual diet requirements of the individual. This necessitated the calculation of several standard diets. An attempt was made to hold the water and mineral content as nearly constant as possible while the protein and calories were increased (diets 3, 4, 5 and 6, table 1). Two thousand cal-

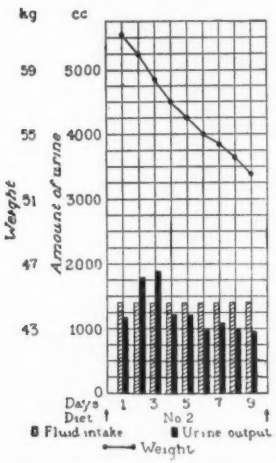

CHART 1. CASE 1. FINDINGS IN CHRONIC NEPHROSIS

ories, diet 3, was suitable for a group of patients who were able to be up and required about 30 per cent more than their basal calories, without an increase in protein allowance, the increased fat and carbohydrate acting as sparers of body protein. Diet 4 (table 1) was calculated for the patient needing 50 grams of protein daily. Diet 5 (table 1) shows the increase in water and minerals necessary to allow the patient 50 grams of protein and 2500 calories daily. Diet 6 (table 1) shows the increase in water and minerals necessary to allow the patient 60 grams of protein and 3000 calories daily. As the protein and calories in the diets increased over the basal, a slight increase in water and mineral content occurred. Calories were increased by adding sugar and fat. Egg and milk protein were used to increase the protein content of diets 4 and 5.

A number of menus for varying the methods of preparing and serving the diets were planned. Patients were taught how to prepare these diets at home, and each patient was provided with a pair of gram food scales and instructed in their use. Quantitative diet sheets were written for these patients and lists of substitutions provided for everyday use. Food values and diet calculation were taught to the patient or to some

TABLE 2

Weighed low salt, low fluid diet (diet 2, table 1)

	GRAMS
Breakfast:	
Ten per cent fruit	100
Eggs (one)	
Toast	20
Butter	10
Sugar	5
Dinner:	
Five per cent vegetable	100
Rice	100
Banana	100
Meat	45
Mayonnaise	15
Bread	20
Butter	15
Sugar	5
Supper:	
Five per cent vegetable	100
Macaroni	100
Fifteen per cent fruit	100
Ten per cent fruit	100
Bread	20
Butter	15
Eggs (one)	
Mayonnaise	15
Sugar	5

member of his family but, with a diet holding thirteen factors constant, the variety of food is necessarily limited. These patients have been successful in following instructions at home and have become adjusted to the dietary limitations. Table 2 gives the quantities of the individual articles of food for a single day on a diet of 40 grams of protein and 1500 calories. Table 3 gives the quantities of the individual articles of food for a single day on a diet containing 60 grams of protein and 3000 calories.

Chemical content. Analysis of the water and mineral content of the particular foods served in the weighed low salt, low fluid diet (diet 2) was undertaken because of the significance the minerals are believed to have in the dietary treatment of the cases described; also to determine whether analysis with the newer micro methods would yield data that would

TABLE 3

Weighed low salt, low fluid diet (diet 6, table 1)

	GRAMS
Breakfast:	
Ten per cent fruit	100
Bread	30
Butter	20
Eggs	1
Sugar	10
Jelly	35
Dinner:	
Five per cent vegetable	100
Banana	100
Potato	100
Bread	35
Butter	25
Meat	85
Forty per cent cream	50
Mayonnaise	30
Sugar	10
Jelly	30
Opera Sticks	35
Supper:	
Five per cent vegetables	100
Grapefruit	100
Apple	100
Potato	100
Bread	35
Butter	25
Eggs	2
Mayonnaise	30
Sugar	10
Jelly	35

corroborate the results obtained by previous workers, especially those used by Sherman[3] in his tables. It was believed that should the methods

[3] Sherman, H. C., and Gettler, A. O.: The Balance of Acid-Forming and Base-Forming Elements in Foods, and Its Relation to Ammonia Metabolism, J. Biol. Chem. 11: 323–338, 1912.

used by us for mineral analysis give results reasonably close to the accepted standards for the mineral content of foods such as Sherman has compiled, we would be justified in using them, for purposes of calculation.

In table 4, Sherman's figures and our data are compared. In most cases the two are remarkably close, but nearly every food shows variation, sometimes to a considerable extent in one or more of the minerals. The greatest differences occurred in the case of dried fruits. Discrepancies in these foods were not unexpected because the manner of drying and the degree to which they are dried offer considerable chances of error. Hence, whenever possible these foods are not included in diets served during periods when accurate studies are being made.

For studies such as those reported here, in which no special attempt has been made to determine with great accuracy the mineral balance, the use of standard figures for purposes of calculating the approximate daily intake of mineral and water seems justifiable.

Determinations of the inorganic acid and basic ions, urea nitrogen, ammonia nitrogen and total nitrogen of the urine were made in two normal persons and two patients with edema and ascites who were receiving diets 2 or 4. Daily estimations were made during the four experiments and listed for the two patients, but only the values of the first and last day of the two normal controls are given. The daily inorganic and nitrogen content of the diet also is given (table 5). This table shows the decrease in the excretion of the inorganic salts and ions which occurs when a normal person changes from an ordinary mixed diet to one low in mineral content. On the fifth day of experiment with subject 6 and on the third day of experiment with subject 5 the total nitrogen of the urine approximates that in the diet. Similar nitrogen values were obtained in case 1. In the normal controls the output of chlorine and sodium reached values close to those of the dietary intake on the third and fifth days, respectively.

The results obtained in cases 7 and 1 are included to show by contrast how the daily urine excretion of chlorine and sodium in abnormal cases continued to be persistently higher than the intake. This excess excretion of chlorine and sodium is due in part to the abnormal storage of these ions in the tissues of these patients. Such a continued net loss of chlorine and sodium also emphasizes the therapeutic value of the diet.

USE OF THE DIETS

Up to the present we have used the low salt, low fluid diet in 165 cases, of subacute or chronic nephritis, of liver disease with ascites and of

TABLE 4

Food analysis

FOOD	WATER		SODIUM		POTASSIUM		CALCIUM		MAGNESIUM		CHLORINE	
	Clinic	Atwater and Bryant*	Clinic	Sherman	Clinic	Sherman	Clinic	Sherman	Clinic	Sherman	Clinic	Sherman
	grams per cent	*grams per cent*	*grams per cent*	*grams per cent*	*grams per cent*	*grams per cent*	*grams per cent*	*grams per cent*	*grams per cent*	*grams per cent*	*grams per cent*	*grams per cent*
Orange	86.8	86.9	0.0138	0.012	0.156	0.177	0.021	0.045	0.008	0.012	0.008	0.006
Orange juice	85.9		0.009	0.008	0.200	0.182	0.015	0.029	0.014	0.011		0.003
Grapefruit	90.8		0.006	0.004	0.164	0.161	0.010	0.021	0.007	0.009	0.009	0.005
Banana	72.0	75.3	0.030	0.034	0.408	0.401	0.006	0.009	0.028	0.028	0.126	0.125
Apple	85.9	84.6	0.015	0.011	0.123	0.127	0.117	0.007	0.006	0.008	0.037	0.005
Beans	94.3	93.7	0.015	0.019	0.160	0.247	0.052	0.046	0.019	0.025		0.024
Lettuce	96.2	94.7	0.0272	0.027	0.209	0.339	0.028	0.043	0.011	0.017	0.056	0.074
Tomato	92.0	94.3	0.224	0.010	0.280	0.275	0.006	0.011	0.011	0.010	0.058	0.034
Potato	74.3	75.5	0.018	0.021	0.501	0.429	0.005	0.014	0.019	0.028	0.027	0.038
Rice	70.6	72.5	0.012	0.025	0.046	0.070	0.020	0.009	0.033	0.033	0.056	0.054
Macaroni	76.6	78.4	0.0095	0.008	0.054	0.130	0.036	0.022	0.038	0.037	0.077	0.073
Bread, salted	29.7	35.6	0.517	0.394	0.110	0.108	0.040	0.027	0.028	0.023	1.09	0.607
Bread, salt free	40.3	35.6	0.067	0.394	0.070	0.108	0.016	0.027	0.013	0.023	0.116	0.607
Bread, whole wheat, saltfree		38.4	0.034		0.108		0.011		0.039		0.031	
Steak, porterhouse	47.0	52.4	0.409	0.067	0.402	0.271	0.006	0.009	0.025	0.018	0.045	0.060
Egg white	84.7	86.2	0.190	0.156	0.137	0.160	0.012	0.015	0.012	0.010	0.163	0.155
Egg yolk	50.1	49.5	0.114	0.075	0.109	0.115	0.125	0.137	0.014	0.016	0.050	0.166
Butter, salted	35.0		0.929	0.788	0.019	0.014	0.016	0.015	0.002	0.001	0.935	1.212
Butter, salt free			0.069		0.004	0.014	0.015	0.015	0.050	0.001	0.162	
Salad dressing	7.6		0.041		0.008		0.009		0.002		0.056	
Sugar	0.0		0.001		0.004		0.008		0.003		0.033	

Fig	14.0	18.8	0.081	0.046	0.647	0.964	0.143	0.162	0.054	0.071	0.198	0.043
			0.072		0.742		0.180		0.058			
			0.076		0.694		0.161		0.056			
Raisin	22.0	14.6	0.099	0.133	0.648	0.820	0.023	0.064	0.025	0.083	0.066	0.082
			0.103		0.909		0.063		0.044			
			0.101		0.799		0.043		0.034			
Date	16.7		0.049	0.055	0.611	0.034	0.065	0.047	0.069	0.069	0.268	0.228
		15.4	0.048		0.490		0.037		0.046			
			0.049		0.500		0.035		0.046			

* Atwater, W. O., and Byrant, A. P.: The Chemical Composition of American Food Materials, ed. 3, United States Department of Agriculture Office of Experimental Station, Bull. 28, Washington, Government Printing Office, 1906.

TABLE 5

Comparison of intake of food and output in urine

CASE	AGE	SEX	DIET	DATE, 1925	URINE	CHLORINE		SULPHUR, CALCULATED AS SO_3		PHOSPHORUS		SODIUM		POTASSIUM		CALCIUM		MAGNESIUM		AMMONIUM NITROGEN, OUTPUT	UREA NITROGEN OUTPUT	TOTAL NITROGEN		DIAGNOSIS
						Intake	Output	Intake	Output	Intake	Output	Intake	Output	Intake	Output	Intake	Output	Intake	Output			Intake	Output	
					cc.	*gm.*	*gm.*	*gm.*	*gm.*	*gm.*	*gm.*	*gm.*	*gm.*	*gm.*	*gm.*	*gm.*	*gm.*	*gm.*	*gm.*	*gm.*	*gm.*	*gm.*	*gm.*	
5	29	M.	4	6/23	500	0.87	2.33	1.698	1.22	0.741	0.495	0.747	1.61	1.772	1.25	0.292	0.16	0.208	0.085	0.365	6.1	8.0	7.6	Control
				6/25	450		0.86		1.15		0.662		0.35		1.33		0.18		0.120	0.396	6.1		8.6	
6	29	M.	2	4/28	975	0.67	3.68	1.405		0.66	0.76	0.51	2.22	1.62	2.28	0.23	0.144	0.20	0.092	0.36	8.09	6.4	9.6	Control
				5/ 2	425		0.61				0.49		0.44		1.92		0.092		0.093	0.23			6.9	
7	36	M.	2	9/ 1	700	0.67	2.77	1.405	0.182	0.66	0.336	0.51	1.89	1.62	1.23	0.23		0.20				6.4		Portal cirrhosis with ascites
				9/ 2	1,200		3.02		0.180		0.444		2.26		1.51					0.492				
				9/ 3	900		2.16		0.783		0.369		1.71		1.17									
				9/ 4	700		2.02		0.728		0.413		1.94		1.02					0.210				
1	48	F.	2	5/22	1,150	0.67	4.32	1.405		0.66	0.322	0.51	2.76	1.62	1.43	0.23	0.018	0.20	0.061	0.288	3.76	6.4	6.4	Chronic nephrosis
				5/23	1,800		5.40		0.396		0.486		3.98		1.78		0.015		0.074	0.738	5.73		7.5	
				5/24	1,850		5.34		0.229		0.420		2.77		1.52		0.009		0.074	0.352	4.83		6.3	
				5/25	1,200		3.67		0.341		0.396		1.20		1.24		0.011		0.052	0.214	3.36		6.1	
				5/26	1,200		3.67		0.342		0.432		2.22		1.36		0.017		0.048	0.240	3.53		6.3	
				5/27	950		3.20		0.391		0.390		2.15		1.18		0.011		0.036	0.257	2.22		5.2	
				5/28	1,050		2.70		0.311		0.420		1.94		1.23		0.011		0.041	0.284	3.15		5.9	

cardiac decompensation with ascites. In many of these cases satisfactory diuresis was produced by the combined use of the diet, ammonium chloride and novasurol.[4] In a case of chronic nephrosis (case 1, table 5, chart 1) spontaneous diuresis and loss of edema occurred and body weight decreased 8.5 Kg. on the diet alone. Later it was found necessary to use novasurol and ammonium chloride to reduce the marked edema further.

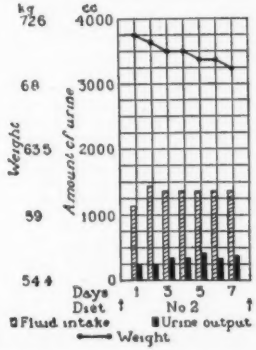

CHART 2. CASE 2. FINDINGS IN BANTI'S DISEASE WITH ASCITES

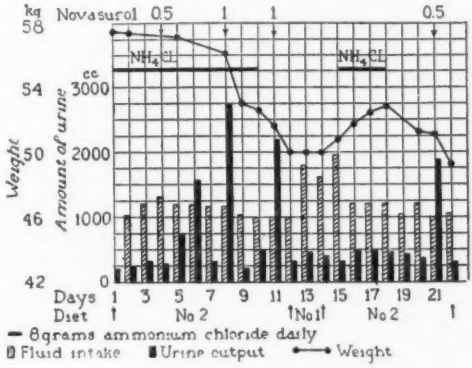

CHART 3. CASE 3. FINDINGS IN CHRONIC NEPHROSIS

Similarly, in a case of Banti's disease with ascites the patient lost 2 Kg. in body weight in seven days on the diet alone (chart 2).

Two patients undergoing the combined treatment found this diet difficult to take so the salt and water content was increased; there

[4] Keith, N. M., Barrier, C. W., and Whelan, Mary: The Diuretic Action of Ammonium Chloride and Novasurol in Cases of Nephritis with Edema, J. A. M. A. **85**: 799–806 (Sept. 12), 1925. Rowntree, L. G., Keith, N. M., and Barrier, C. W.: Novasurol in the Treatment of Ascites in Hepatic Disease, J. A. M. A. **85**: 1187–1193 (Oct. 17), 1925

was a rapid retention of fluid and gain in weight. One of these, a patient with chronic nephrosis (case 3, chart 3), was finally able to take the low salt, low fluid diet regularly and the combined treatment produced the desired effects. We had a similar experience in a case of ascites (case 4, chart 4).

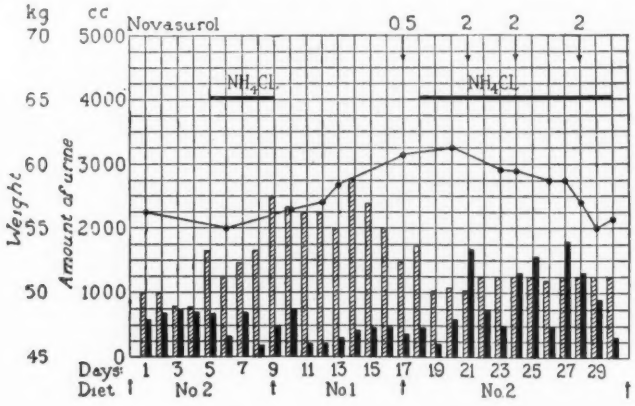

CHART 4. CASE 4. FINDINGS IN POLYCYTHEMIA WITH ASCITES

Heavy horizontal line, from 36 to 72 grams of ammonium chloride; curve, weight; shaded columns, fluid intake; solid columns, urine output.

SUMMARY

Carefully controlled diets of low mineral and water content are both practicable and effective in the treatment of cases of edema and ascites. The diets may be varied in protein and caloric value with little increase in mineral or water content.[5] There have been no demonstrable ill effects from the continued use of these diets for a period of two years.

The following are daily menus affording a considerable variation in food constituents:

Sunday

Breakfast: Baked apple, poached egg, toast, butter.

Dinner: Roast chicken, buttered rice, asparagus tips, tomato, celery and lettuce salad, sliced orange, bread, butter.

Supper: Egg with macaroni and tomato, celery tips, grapefruit salad, baked banana, bread, butter.

[5] Atwater, W. O., and Bryant, A. P.: The Chemical Composition of American Food Materials, ed. 3, United States Department of Agriculture, Office of Experimental Station. Bull. 28, Washington, Government Printing Office, 1906.

Monday

Breakfast: Sliced orange with sugar, egg omelet, toast, butter.
Dinner: Steak, buttered macaroni, string beans, lettuce and banana salad, bread, butter.
Supper: Grapefruit cocktail, rice with tomato, lettuce and spinach salad with egg, baked apple with sugar, bread, butter.

Tuesday

Breakfast: Grapefruit with sugar, poached egg, toast, butter.
Dinner: Chicken with rice, tomato and lettuce salad, baked banana with sugar, bread, butter.
Supper: Macaroni with tomato sauce and hard cooked egg, apple, celery and lettuce salad, orange with sugar.

Wednesday

Breakfast: Sliced banana with sugar, soft cooked egg, toast, butter.
Dinner: Rice and meat croquette, asparagus tips, spinach with lemon, orange with sugar, bread, butter.
Supper: Grapefruit cocktail, buttered macaroni, egg omelet, tomato, celery and lettuce salad, baked apple.

Thursday

Breakfast: Baked apple, poached egg, toast, butter.
Dinner: Lamb chop with rice, buttered cauliflower, grapefruit salad, bread, butter.
Supper: Baked egg, buttered macaroni, stewed tomato, head lettuce salad, orange and banana cup, bread, butter.

Friday

Breakfast: Orange, scrambled egg, toast, butter.
Dinner: Fish with lemon, buttered rice, spinach, cucumber and head lettuce salad, baked apple.
Supper: Macaroni with egg, asparagus tips, banana salad, grapefruit with sugar.

Saturday

Breakfast: Grapefruit, soft cooked egg, toast, butter.
Dinner: Steak, buttered macaroni, string beans, lettuce salad, raw apple, bread, butter.
Supper: Orange cocktail, egg omelet, buttered rice, radish, tomato and lettuce salad, grapefruit, bread, butter.

THE KARELL DIET AND A MODIFIED KARELL DIET IN THE TREATMENT OF CARDIAC DROPSY[1]

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The importance of a diet that is low in salt and water for certain cases of edema has long been recognized. Widal, in 1903, demonstrated the efficacy of a diet low in salt for certain cases of nephritic edema. Long before his work was published others had successfully used diets that embodied these factors in the treatment of edema cases, but they did not explain their good results on the basis of a low salt and water content. Among the earliest of this group of writers was Karell, who in 1866 published a paper in which he outlined a special "milk diet" or "milk cure" for use in edema cases. This diet later became known as the Karell diet.

Goodman, in 1916, reported favorable results from the use of the Karell diet in the treatment of cardiac, renal, and hepatic dropsy. The following is quoted from Goodman's paper: "Although half a century has elapsed since Karell published his paper (1866), this particular form of diet bearing his name seems to be little known and but rarely used. In Germany it is slowly finding its place, but as recently as 1908 Jacobs (Münchener medizinische Wochenschrift, 1908, p. 839) wrote that he could find no mention of it in the textbooks, and but little practical knowledge of its existence among physicians. In America it is known, but not intimately, and it has not secured for it the acclaim which would be its portion were it employed more frequently. The article by Karell in which he describes this milk cure was published in Archives générale de médicine, 1866, viii, 513, and apparently was entirely forgotten, and would, no doubt, have remained in obscurity, had not Jacobs (Münchener medizinische Wochenschrift, 1908, p. 839) reported the results obtained with it in Lenhartz' Clinic, where it had been used for about fifteen

[1] Submitted for publication February 10, 1927.

years. Just how many of the few writers on the subject have read Karell's original paper, it is impossible to say, but Jacobs has given the year of publication as 1868 instead of 1866, and his error has found its way into practically every article since 1908, so that the inference that few have read the original is perhaps justified. Possessed as it is of great practical interest and of historical interest as well, written in a peculiarly intimate manner and naïve in spirit, Karell's paper should be read at first hand."

The technic of the Karell diet is simple and easily carried out so far as the physician is concerned. The patient receives daily at 8 a.m., 12 m., and at 4 and 8 p.m., 200 cc. of raw or boiled milk, warm or cold, according to taste. No other food or liquid should be given. Usually at the end of a week the diet is gradually increased because of the low calorie value but the diet remains relatively low in salt and water throughout the entire "cure." The diet should be given only when the patient is at rest in bed, and usually in conjunction with proper drug threapy.

In the last two years we have had the opportunity of treating a considerable number of cases of edema due to cardiac, renal, and hepatic diseases, and we are convinced of the value of diets low in water and mineral content in all cases except those associated with urea retention in the blood. The recent work of Keith, Smith, and Whelan gives confirmatory data on this point.

In practically all of the cases of renal and hepatic dropsy, with the exceptions noted below, the course is somewhat protracted, and there is no indication for a low calorie diet such as Karell's. We have preferred, therefore, to use one of the low salt, low fluid diets, as outlined by Keith, Smith, and Whelan, which has nearly the same water and mineral content as the Karell diet, but which contains from 1500 to 3000 calories.

However, in the cases of edema due to cardiac decompensation, the Karell diet has definite value. These patients have congestion of the liver and of the gastric mucosa. They are easily nauseated and assimilate their food poorly. It seemed, therefore, that with the patient at rest in bed a low calorie diet was advisable, and when the other factors of low salt, low water and easy digestibility were considered the Karell diet was therefore used.

In certain cases the diet was entirely satisfactory but in others the patients were opposed to it, chiefly because of thirst and the monotony of the food, but also occasionally because of the dislike of milk. For these reasons we modified the diet to include a wider variety of food, and we allowed some extra water without increasing the total fluid intake or

the food value and without appreciable change in the salt content. The foods selected for the modified Karell diet are prepared without adding salt, the food being weighed and served as follows:

Breakfast

Bread (toast)	10 grams
Ten per cent fruit (orange)	100 grams
Sugar	5 grams
Egg	1

Dinner

Bread	10 grams
Cream soup	150 grams
Butter	5 grams

Supper

Bread	10 grams
Milk	200 grams
Butter	10 grams
Egg	1

A comparison of the composition of the two diets according to Sherman's Tabulation shows but slight variation in the composition, the modified Karell diet, however, contains less water than the Karell diet. This allows the patient water or pellets of ice to make the total intake of fluid in water and food up to the 700 cc. found in the Karell diet.

Composition of diets

DIET	CARBOHYDRATE	PROTEIN	FAT	WATER	CALCIUM	MAGNESIUM	POTASSIUM	SODIUM	PHOSPHORUS	CHLORIN	SULPHUR	FERRUM
Karell	40	24	32	696	0.96	0.096	1.144	0.408	0.744	0.848	0.272	0.0019
Modified Karell	53	26	40	465	0.40	0.073	0.866	0.583	0.550	0.852	0.368	0.010

The modified diet has been proved most satisfactory in the treatment of marked cardiac dropsy. The patients prefer it to the strict Karell diet and take it with little complaint for from four to six days. At the end of this time they are usually better able to assimilate their food, and they are placed on one of the higher calorie diets, with low salt and low water contents.

During the last year in the wards at St. Mary's Hospital at Rochester, Minnesota, seventeen patients have been given the Karell diet and thirty-eight the modified form. Patients have complained much less of the latter and the effectiveness of the diets is practically the same.

SUMMARY

The Karell diet or a modified Karell diet is of definite value in the treatment of cases of marked cardiac dropsy. In our experience the modified form is the more satisfactory from the standpoint of the patient and is at the same time practical and easily served.

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A REPORT OF A CASE OF DIABETES WITH COMPLICATIONS

Nephrosis, Nephritis, and Hypertension

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In reporting the following case, let it be understood at the outset, that it was not undertaken with any idea or hope of accomplishing a cure, such would have been impossible. But that a definite improvement could be brought about in the diabetic condition for which the patient sought treatment in the first instance, and at least a marked improvement hoped for in the accompanying complications, the dietary management of which made those instituted for the diabetes seem simple by comparison.

From a standpoint of dietetic therapeutics, the case of Mrs. L. proved to be one of the most interesting, as well as the most difficult of my experience. The age of the patient, and the long duration of existing pathological conditions, made it necessary to give much time and attention to her individual tastes and idiosyncrasies. While the nature of the complications accompaning the diabetes, compelled an exceedingly careful handling of the food materials, themselves, in order to avoid aggravating one symptom in our effort to relieve another.

CASE REPORT

Name, Mrs. L. (Jewess). Rudner Clinic. Physicians, Drs. Rudner and Drane. Consultant, Fairfax T. Proudfit. Date, May 5, 1925. Aged sixty-five years. Weight, 52 kgm. Normal weight, 59 kgm.

Diagnosis: diabetes mellitus with complications (Nephrosis, nephritis, hypertension).

Examination. Urine: Three per cent sugar; 3 plus albumin; urea 30.3; Creatinin, 1.93; specific gravity low, but not fixed.

Blood: 0.258 mgm. sugar per 100 cc.

Liver enlarged and tender.

The patient had received instructions in dietary management, and in the technique for the administration of insulin previous to the date of admission. At this time she was taking from 60 to 70 units of insulin daily.

Treatment and diet were instituted, and the insulin dosage reduced from

70 to 35 units, per day, this was given before morning and evening meals. The patient improved steadily under this regime, being sufficiently well to undertake a western trip by the middle of June. She remained in the West until October, when she returned to Memphis, and paid a visit to the Clinic.

She reported that the treatment administered while away differed from that which she had been taking before she left town.

She complained of severe pain and heaviness in the head, general weakness and dizziness; upon examination the urine showed a three per cent sugar, and four plus albumin; the blood sugar content being 0.330. She was voiding 1500 cc. of urine per night, and had no bowel movement without salts or mineral oil.

It must be said here, that this patient proved very difficult to keep to a diet, as soon as she began to feel better, as a result of a strict adherence to the rules, she would break over.

She made promises only to break them, until finally, almost a year from the date of her first admission into the Clinic, and after a regular food spree, her physician received an urgent call to her bedside. On readmission to the Clinic she was in practically an unconscious condition with a blood pressure of 265/78. She was at once removed to the hospital and 240 cc. of blood withdrawn. The blood pressure dropped rapidly. After several days in the hospital she returned home and I was called in to make the necessary dietary adjustments. No record was given of the diet during hospitalization, save that it furnished approximately 1600 calories per day, with an insulin dosage of 15 units.

The diet prescription was arranged as follows:

℞. Carbohydrate	40 grams
Protein	80 grams
Fat	120 grams
Calories	1560
Insulin	15 units*

* Eight units before breakfast and 7 units before the evening meal.

The dietary was arranged in four meals instead of the regulation three per day, the mid-afternoon luncheon consisting of the salad, the beverage, or dessert, which would otherwise have been included in the mid-day meal.

No salt was used in the preparation of the food, salt low food materials were selected (butter being the only exception, regular creamery butter being served instead of sweet butter).

The protein content of the diet was derived from cottage cheese, chicken, or fish, one glass of acidophilus, or buttermilk (after carbohydrate content of diet reached 50 grams, per day) granulated gelatin and occasionally nuts. Philadelphia cream cheese or Neufchatel was substituted for cottage cheese, or for part of the fish or chicken to vary the diet.

The flatness, or lack of flavor in the food was relieved by the addition of minute quantities of cinnamon, nutmeg or vanilla, the bowl in which the salad was mixed was occasionally rubbed with garlic for the same purpose. A salt free dietary becomes progressively monotonous, and, therefore, more and more difficult to administer without such aids to flavor.

American cheese was given only once in a while, but this material being especially liked by the patient was included about once each week, the salt intake being regulated accordingly. Fifteen grams of pure glycerine was ordered by the physician to be included each day. This was estimated as 40 per cent glucose, and included in the carbohydrate quota for the day. Granulated gelatine was used up to 15 grams per day. It was added to the soup, to hot beverages, dissolved and stirred into cold beverages, salad dressing and cream cheese filling for cellu wafers, in addition to the regulation gelatine, desserts and jellied salads. Gelatine having a distinctive flavor and odor, requires careful handling, otherwise the patient may refuse the dish into which it is introduced. But, if care and ingenuity is observed, both flavor and odor can be so disguised as to make this valuable food unrecognizable.

The fats used in this dietary were furnished by 40 per cent cream, butter, and salad oil; 240 cc. of 40 per cent cream, and from 15 to 45 grams of butter were allowed each day.

When a fatty fish or cheese, high in fat, was used, the butter allowance was reduced in the day's dietary, or a 20 per cent cream substituted for the one of higher fat content, in making the latter substitution one serving of thrice cooked vegetable replaced the usual 5 per cent vegetable, in order to keep the carbohydrate content of the diet intact. The salt never exceeded 1.7 grams per day.

The dietary adjustments were made with the greatest care, the prescription being changed from time to time as the condition of the patient changed. As the edema disappeared the protein content of the diet was reduced and the carbohydrates and fats raised to supply the necessary calories. The final discharge diet contained 50 grams of carbohydrates, 60 grams of protein, and 125 grams of fat, with 15 units of insulin administered in two doses each day.

At this time the general appearance of the patient was much improved, her color was better, the swelling in the face, hands and feet greatly reduced, and she was in better spirits. Examination and laboratory findings at this period were as follows:

The diabetes showed: Urine sugar negative, blood sugar, 0.170.

Nephritis: A trace of albumin and few casts.

Nephrosis: Edema controlled, swelling in face, hands and feet practically gone, eyes much clearer.

Blood pressure: 170/85.

It was recommended that the patient continue the strict dietary regime for several months, at least, with frequent calls at the Clinic for checking up

on blood pressure, and for laboratory tests. The patient's daughter was instructed with infinite care in the best means for varying the daily menu, for substituting one type of food for another as the season progressed, how to properly chart the food intake, and for making the urine tests. She was likewise taught to recognize unfavorable symptoms, should they occur, and urged to report same to her mother's physician without delay.

The following daily diet sheets were selected as typical of those used throughout the treatment of the case:

DIETARY

Name: Mrs. L.
Date: April 25, 1926.
℞ Carbohydrates 40 grams; protein 80 grams; fat 120 grams.
Ratio glucose to fat, 1:1.2.

Food allowance for day

Vegetables, 3 per cent	230 grams
Vegetables, 5 per cent	250 grams
Fruit, 10 per cent	70 grams
Cottage Cheese	120 grams
Chicken (broiler)	100 grams
Gelatine (granulated)*	15 grams
Cream, 40 per cent	240 cc.
Butter	20 grams
Bitter chocolate	2 grams
Cellu crackers	
Saccharine	

Breakfast

Broiled ripe tomato	1 medium	100 grams
Toasted cellu wafers	2	
Butter	1 tsp.	5 grams
Hot water tea (cream, 40 per cent, ¼ cup)		60 grams
Saccharine to sweeten		

Carbohydrates 7 grams; protein 2 grams; fat 28 grams.

Luncheon

Cottage Cheese	4 r. tbsp.	120 grams
Cream, 40 per cent	¼ cup	60 grams
Head lettuce with 1000 Island dressing†:		
¼ small head lettuce		100 grams
2 tbsp. dressing		30 grams
Cellu wafers		
Butter	½ square (1 tsp.)	5 grams

Carbohydrates 12 grams; protein 28 grams; fat 30 grams.

* Granulated gelatine used, the entire amount weighed in morning and added to various dishes throughout the day.

† Mineral oil, 2 tsp. chopped canned tomatoes, 2 tsp. chopped celery, 1 tsp. chopped sour cucumber pickle.

Dinner

Broiled chicken	½ small	100 grams
Parsley butter	1 tsp.	5 grams
String beans with butter:		
¾ cup		150 grams
½ square (1 tsp.)		5 grams

Grapefruit salad with mineral oil dressing:

½ grapefruit 2 stalks celery 3 leaves of lettuce 1 tsp. dressing	200 grams

Cellu wafers
Chocolate Bavarian Cream 1 mold (see rule)
Hot water tea (cream, 40 per cent, ¼ cup) ..... 60 grams

Carbohydrate 21 grams; protein 28 grams; fat 63 grams.

The Bavarian is made with gelatine, the milk used Sugar-free Milk* (Merrill-Soule Co.) ½ cup s.f. milk, ¼ cup 40 per cent cream, 1 tsp. bitter chocolate, 2 T. water, 2 tsp. gelatine, s.f. vanilla to flavor.

Date: April 29, 1926.

Dietary readjusted. ℞. Carbohydrates 40 grams; protein 70 grams; fat 125 grams; calories 1565.

Food for day

Selected in the morning and divided into four meals as follows: Breakfast, Luncheon, Dinner; orange on retiring.

Vegetables, 3 per cent	235 grams
Vegetables, 5 per cent	75 grams
Fruit, 10 per cent and 15 per cent	200 grams
Milk (S.F.)	240 cc.
Cream, 40 per cent	240 cc.
Butter	20 grams
Neufchatel cheese	30 grams
American cheese	30 grams
Fish	100 grams
Gelatin	10 grams

Breakfast

Hot water tea, cream	¼ cup	60 grams
Baked apple (small)	1	100 grams
Cellu crackers		
Butter	½ square	5 grams

Carbohydrates 16 grams; protein 1.5 grams; fat 28 grams.

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* Sugar-free Milk no longer manufactured.

Luncheon

Asparagus soup:	
S.F. milk.....1 cup	240 grams
4 stalks asparagus	50 grams
½ square, 1 tsp. butter	5 grams
½ tsp. pastry gum	
Cream cheese and celery salad:	
¾ roll Neufchatel cheese	30 grams
4 small stalks celery	50 grams
3 leaves lettuce	30 grams
2 tsp. olive oil in French dressing	
Add 2 teaspoons gelatin to soup	

Carbohydrate 14 grams; protein 24 grams; fat 29 grams.

Dinner

Fish—2 pieces, 3 x 3 x ½ inch	100 grams
Escalloped eggplant with cheese:	
½ cup eggplant	100 grams
4 T. (grated) cheese	30 grams
Thrice-cooked cauliflower with butter:	
¾ cup cauliflower	100 grams
1 square, 2 tsp. butter	10 grams
Perfection salad with mineral oil dressing:	
¼ cup cabbage, raw	25 grams
½ green pepper	50 grams
2 stalks celery	30 grams
2 T. vinegar	
2 tsp. gelatin	
½ cup water	
Charlotte:	
¼ cup 40 per cent cream (whipped)	60 grams
1 T. water	
1 tsp. gelatin	
Vanilla (s.f.)	
Saccharine to sweeten	
Hot water tea	
¼ cup 40 per cent cream	60 grams
Cellu wafers	

Carbohydrates 9 grams; protein 41 grams; fat 70 grams.

Date: May 25, 1926.

Material for day

Fruit, 10 per cent	150 grams
Vegetables, 3 per cent	90 grams
Vegetables, 5 per cent	150 grams
Vegetables, 10 per cent	60 grams
Cream, 40 per cent	240 grams
Tuna fish	80 grams
Chicken	50 grams

Cottage cheese	80 grams
Butter	45 grams
Gelatin	8 grams
Glycerine	15 grams
Cellu wafers	
Cocoa shells for infusion	
Olive oil	30 grams

Breakfast

Hot water tea
- ¼ cup cream
- 1 tsp. glycerine
- ¾ cup hot water

Sliced orange—1 medium
Cellu wafers with butter ½ square, 1 tsp.

Value: Carbohydrate 14 grams; protein 1 gram; fat 24 grams.

Luncheon

Tomato bouillon:
- ½ cup tomato (canned)
- Thin slice onion, sprig parsley
- ¾ cup water
- 2 tsp. gelatin

Tuna fish salad:
- ½ cup tuna fish
- 2 stalks celery
- 3 leaves lettuce
- French dressing (1 T. olive oil)

Cellu wafers with butter ½ square

Carbohydrate 8 grams; protein 17 grams; fat 20 grams.

Mid-afternoon luncheon

Cottage cheese with cream:
- 3 r. (scant) tbsp. cheese
- 2 T. cream

Carbohydrate 5 grams; protein 17.5 grams; fat 13.5.

Dinner

Cream chicken on toasted Cellu wafers:
- 2 thin slices chopped
- ¼ cup cream
- ½ square butter
- ⅛ tsp. pastry gum

Buttered onions:
- 2 medium white onions
- 1 square butter

Cabbage slaw:
- ½ cup chopped cabbage
- 2 stalks celery
- French dressing (olive oil)

Cellu wafers with butter—1 square
Cocoa Jelly with cream:
  Cocoa shells to make ¾ cup infusion
  1 tsp. gelatin
  2 tsp. glycerine
  2 T. cream
Hot water tea:
  ¼ cup cream, ¾ cup water
½ sliced orange before retiring

Carbohydrates 50 grams; protein 60 grams; fat 126 grams.

SCIENTIFIC BUYING AND MEAL PLANNING[1]

QUINDARA OLIVER, B.S., M.A.

Defoe in his essay on the Education of Women seems to foreshadow the principles of home economics training in its insistence on a broad margin in woman's education. He realized the value of languages, history, music, dancing, and the art of conversation based on accurate knowledge in giving women their rightful place as partners rather than chattels. Nowadays he would doubtless add a foundation of physical and biological sciences. "I cannot think," he says, "that God Almighty ever made them so delicate, so glorious creatures and furnished them with such charm, so agreeable and so delightful to mankind, with souls capable of the same accomplishments with men; and all to be only Stewards of our Houses, Cooks and Slaves. . . . . A woman well-bred and well-taught, furnished with the additional accomplishments of knowledge and behavior, is a creature without comparison." We thank him. He expresses for us the resentment of dietitians at being considered merely cooks and also recalls the duty of remembering the other side of the picture from that expressed in the title of this paper: the duty of being something more than an efficient machine in dealing with people.

SCIENTIFIC BUYING

Scientific buying is impossible without adequate control and wise selection. We have need for control in the office, the institution, and the kitchen, in the size of the order and in preparation methods. Wise selection entails a knowledge of world food production and distribution problems influencing the price, quality, and seasonal appearance of each food-stuff; an understanding of the traditions and customs of various nationalities, and a sympathetic feeling for them, as well as an appreciation of the intricacy of factory preparation.

Control

An adequate control of food purchases requires records and checks by three persons in three distinct departments. The dietitian makes the

[1] Presented at the annual meeting of the American Home Economics Association, Hotel, Fairmont, San Francisco, Calif., August, 1925.

TABLE 1

PURCHASE ORDER

No. 28624

THE CHILDREN'S HOSPITAL
300 Longwood Ave., . . Boston 17.....May 10....1925
M.....Blank Firm.....
.....Faneuil Hall Market.....
Send us by.....Team.....F. O. B.....

PUT THIS NUMBER ON INVOICE AND ALSO ON ALL SHIPMENTS

ITEM NO.	DESCRIPTION	(1) QUANTITY	(2)	(3)	(4) PRICE QUOTED	(5) UNIT	(6)	(7)
1	Iceberg lettuce.....48's	1 crate			$5.00	crate		
2	Strawberries.....	1 crate			.30	quart		
3	Carrots.....	2 boxes			2.50	box		
4	Beets.....	1 box			2.25	box		
5	Spinach.....	12 baskets			1.00	basket		
6	Oranges, Florida.....216's	4 cases			8.50	case		
7	Grapefruit, Porto Rico.....46	1 case			4.50	case		
8	White potatoes, old, ...cwt.	10 bags			1.00	cwt.		
9	Rhubarb.....	3 boxes			1.10	box		
10	Celery, Boston Mkt.....18	2 boxes			3.25	box		

TERMS: Cash. This order is in accordance with your quotation of May 10, 1925.
Articles not in conformity with specifications will be returned to the shipper at his expense.
RENDER BILLS IN DUPLICATE. INCLUDE ONLY ABOVE ITEMS.
DEPARTMENT Nutrition

THE CHILDREN'S HOSPITAL
by .....Superintendent.

TABLE 2

RECEIVER'S COPY

THE CHILDREN'S HOSPITAL
300 Longwood Ave., . . Boston 17.....May 10.....1925
M..... ....Blank Firm.....
.....Faneuil Hall Market.....
Send us by....Team.....F. O. B.....

No. 28624
PUT THIS NUMBER ON INVOICE AND ALSO ON ALL SHIPMENTS

ITEM NO.	DESCRIPTION	(1)	(2) QUANTITY RECEIVED	(3)	(4)	(5)	(6) DATE RECEIVED	(7)
1	Iceberg lettuce.....48's	1 crate	48 heads		$5.00	crate	5/10/25	
2	Strawberries.....	1 crate	48 quarts		.30	quart	5/10/25	
3	Carrots.....	2 boxes	74 pounds net		2.50	box	5/10/25	
4	Beets.....	1 box	35 pounds net		2.25	box	5/10/25	
5	Spinach.....	12 baskets	180 pounds net		1.00	basket	5/10/25	
6	Oranges, Florida.....216's	4 cases	856 oranges		8.50	case	5/10/25	
7	Grapefruit, Porto Rico.....46	1 case	46 G. F.		4.50	case	5/10/25	
8	White potatoes, old.....cwt.	10 bags	1000 pounds net		1.00	cwt.	5/10/25	
9	Rhubarb.....	3 boxes	97 pounds net		1.10	box	5/10/25	
10	Celery, Boston Mkt.....18	2 boxes	3 dozen		3.25	box	5/10/25	

TERMS: Cash. This order is in accordance with your quotation of May 10, 1925.
Articles not in conformity with specifications will be returned to the shipper at his expense. Condition of goods.
DEPARTMENT Nutrition

THE CHILDREN'S HOSPITAL
by .....Superintendent.

TABLE 3

OFFICE COPY

THE CHILDREN'S HOSPITAL

300 Longwood Ave., . . Boston 17.....May 10.....1925

M.....Blank Firm.....

.....Faneuil Hall Market.....

No. 28624

PUT THIS NUMBER ON INVOICE AND ALSO ON ALL SHIPMENTS

Send us by....Team.....F. O. B.....

ITEM NO.	DESCRIPTION	(1) QUANTITY	(2) QUANTITY RECEIVED	(3) QUANTITY BILLED	(4) PRICE QUOTED	(5) UNIT	(6) DATE RECEIVED	(7) DATE BILLED
1	Iceberg lettuce.....48's	1 crate	48 heads	1	$5.00	crate	5/10/25	5/12/25
2	Strawberries.....	1 crate	48 quarts	48	.30	quart	5/10/25	5/12/25
3	Carrots	2 boxes	74 pounds net	2	2.50	box	5/10/25	5/12/25
4	Beets.....	1 box	35 pounds net	1	2.25	box	5/10/25	5/12/25
5	Spinach.....	12 baskets	180 pounds net	12	1.00	basket	5/10/25	5/12/25
6	Oranges, Florida.....216's	4 cases	856 oranges	4	8.50	case	5/10/25	5/14/25
7	Grapefruit, Porto Rico.....46	1 case	46	1	4.50	case	5/10/25	5/14/25
8	White potatoes, old.....cwt.	10 bags	1000 pounds	10	1.00	cwt.	5/10/25	5/12/25
9	Rhubarb.....	3 boxes	97 pounds	3	1.10	box	5/10/25	5/12/25
10	Celery, Boston Mkt.....18	2 boxes	3 dozen	2	3.25	box	5/10/25	5/12/25

TERMS: Cash. This order is in accordance with your quotation of May 10, 1925.

Articles not in conformity with specifications will be returned to the shipper at his expense.

RENDER BILLS IN DUPLICATE. INCLUDE ONLY ABOVE ITEMS.

DEPARTMENT Nutrition

THE CHILDREN'S HOSPITAL

by .....Superintendent.

food selections after the market order has been approved by the Superintendent, the store-keeper receives them as delivered, the business office approves the bills. Again, the storekeeper fills the daily store order, the administrative dietitian checks actual quantities received in the department; and still another person keeps the index visible file recording the amounts received in the store and the amounts issued to the department as well as the physical inventory. Such a method assures accuracy and honesty, and reduces by one-third the time required to calculate the monthly per capita cost.

Preliminary control

Office. There are many methods of office control but that meriting the greatest commendation requires the original order number to have a serial number corresponding to the confirmation order sent to the firm, as soon as the equipment or food products have been selected.

Thus the white slip with columns 1, 2 and 5 filled out is mailed to the firm with whom the order has been placed. The yellow slip (with columns 1, 2 and 5 filled out) is filed in the business office, or with the billing clerk; while the blue slip filled in with the name of the items and price quoted is sent to the office of the one making selection, that is, dietitian or steward. The actual amount and date received, as shown by the store invoices, are entered on the blue slip in columns 3 and 7 and returned to the business office where the record is also made on the yellow slip. The blue are filed according to the department and the yellow kept in the active file until the bills have been received and checked with the records on the yellow slips, after which the date of approval must be entered in the column provided. The yellow slips with all 7 columns filled in are then filed alphabetically. The approved bills are sent through to the Treasurer's office for payment.

An index visible file drawn up as follows is the basis for the perpetual inventory; data for it is secured from the store invoices and the daily departmental orders on the store. The first six columns record in black the date of orders received and in red the physical inventory taken the last day of each month, the remaining five columns in duplicate record the daily issuances from the store to the several divisions of the department. Since adequate records and data of past results are absolutely necessary for growth and progress in the department, we find that the index visible file is most essential. We may have kept records of menus, contracts for fruits, vegetables, eggs, and butter, data of plate and gar-

TABLE 4

DATE (1925)	RECEIVED FROM	NO.	QUANTITY	UNIT RATE	TOTAL COST	DATE (1925)	DELIVERED TO	QUANTITY	TOTAL COST	BALANCE	DATE	DELIV-ERED TO	QUANTITY	TOTAL COST	BALANCE
5/10/25	C. D. B.	1	48	.1147	5.50	5/11	K	12	1.376	36					
5/18	I. L.	1	48	.1041	5.00	5/12	D. K.	3	.344	33					
5/25	I. L.	1	48	.1041	5.00	5/13	K	20	2.294	13					
						5/16	D. K	2	.229	11					
						5/17	K	11	1.261	0 +48					
5/31/25			36	.1041	3.7476	5/19	K	25	2.6025	23					
6/5	C. D. B.	1	48	.10	4.80	5/20	D. K	3	.3123	20					
6/11	I. L.	1	48	.1041	5.00	5/24	K	20	2.082	0 +48					
						5/26	K	10	1.041	38					
						5/26	D. K	2	.2082	36					
								108	11.7572	36					
						6/1	K	20	2.082	16					
						6/4	K	15	1.5615	1 +48					
						6/6	D. K	2	.2041	47					
						6/9	K	20	2.00	27					

ARTICLE	QUALITY	NO. OR SIZE	LOCATION	UNIT	MAX.	MIN.
Lettuce	Iceberg	Medium	Chest	48		

TABLE 5

REQUISITION

THE CHILDREN'S HOSPITAL

DATE, July 10, 1925

	KITCHEN	PRIVATE WARD	WARDS	DIET KITCHEN	SERVING ROOM	INFANTS	BAKESHOP	GUESTS	O. D. R.
Oranges—4 bad replaced		√ 84 ×	√ 140	24 ×		√ 48 ×	√ 36 ×		
Lemons	√ 36 ×						√ 60 ×		
Ginger ale		√ 12 ×	√ 10				√ 18 ×		
Grape juice		√ 12 ×	√ 10						
Eggs, contract	√ ½ cs. ×		√ 1 doz.	√ 4 doz. ×		√ ½ doz. ×			
Tea	√ 1 lb. 6 oz. ×								
Coffee	√ 1½ lb. ×				√ 3 lbs. ×				√ 5 lbs. ×
Sugar, granulated	√ 8 lbs. ×				√ 15 lbs. ×		√ 25 lbs. ×		√ 10 lbs. ×
Lettuce	√ 27 heads ×			√ 2 heads ×					
Potatoes	√ 3 bags ×								
Carrots									
Onions									
Soap powder	√ 12 lbs. ×				√ 5 lbs. ×				
Butter, cut 2 T	√ 18–18 ×								
Butter, uncut			○ 2 lbs.						
Cream cheese				○ 1 box					
Tomatoes # 3 B. B						√ 1 can ×			
Lambs, pluck	○ 1								
Lard							√ 10 lbs. ×		
California prunes # 10 D. L							√ 3 cans ×		
Pitted prunes # 10 D. L							√ 3 cans ×		
Seedless raisins							√ 5 lbs. ×		
Evaporated apples							√ 6 lbs. ×		
Salt	√ 10 lbs. ×						√ 10 lbs. ×		
Bread flour							√ 1 bag ×		
Confectionery sugar							√ 5 Pkg. ×		
Skim Klim							√ 10 lbs. ×		
54 grapefruit				√ 3 ×					
Cornflakes					√ 4 pkg. ×				√ 3 pkg. ×
Puffed Wheat					√ 2 pkg. ×				√ 2 pkg. ×
Puffed Rice									√ 2 pkg. ×

Graham crackers						√ 1 box ×				
Soda crackers						√ 2 boxes ×				
Red raspberries	√ 3 pt. ×									
Pineapple	√ 1 ×									
Mackerel	√ 100 lbs. ×									
Celery	√ 18 bunches ×			√ 1 bunch ×						
Peas, fresh	√ 6 boxes ×									
Strawberries		√ 3 qts. ×								
New potatoes	√ 5 lbs. ×									
Parsley	√ ½ lb. ×									
Noodles	√ 3 lbs. ×									
Rack lamb	√ 1 ×									
Cucumbers	√ 15 ×									
Salmon	√ 25 cans ×									
Dates	√ 2 pkg. ×									
Sweet gherkins	√ 15 gal. keg. ×									
Sweet mixed pickles # 10 D. L.	√ 1 can ×									
Pearl barley	√ 14 lbs. ×									
Sausage, Blackstone	√ 12 lbs, ×									
Sausage, Sageleaf	√ 34 lbs. ×									
Bottoms round	√ 6 ×									
Shin meat	√ 15 lbs. ×									
Beans	√ 20 lbs. ×									
Salt pork	√ 5 lbs. ×									
Roosters	√ 7 ×									
Blueberries	√ 1 qt. ×									
Spinach fresh				√ 5 lbs. ×						
Beets		√ 5 bunches ×								
Apples		√ 15 lbs. ×								
Hominy		√ 2 lbs. ×								
Rolled Oats				√ 2 lbs. ×						
Pineapple #2 B. B.				√ 1 can ×						
Lambs, fores	√ 1½ sets ×									
Bananas	√ 75 lbs. ×									
Oil	√ 5 gal. ×									
Vinegar	√ 1 gal. ×									

* Storekeeper's check √, Dietitian's check ×

bage waste for years, but these have a negative value unless interpreted by the records of the index visible file. Dietitians are handicapped at every turn by lack of positive facts that will prove or justify their decisions and results. Figures talk more convincingly than all the theorizing in the world.

Store. The first step is to place in charge an accurate, dependable conscientious storekeeper. The second is to require all food products returned to the dealer at once if the driver does not present a delivery invoice with the goods. The weight, count, brand, packages, etc. must be entered by the storekeeper opposite the respective article before he approves the receipt and dismisses the driver. For his permanent store record, he copies on the form provided, the date, firm's name, and article; the supplementary data vary with the product received: for example, the net weight of roots and tubers; the brand, size of can, and number to case of canned goods; the gross weight and number of pieces of meat and fowl. This form is blocked in a convenient book size and furnished with a contrasting colored page for the carbon copy. The carbon copies and the original invoices are left in the dietitians office at the end of each day. This information is checked with market order book as to price, quantity and quality, and then entered on the blue slips which have already been described. Too much stress cannot be placed upon the necessity for an accurate method of receiving goods.

The nutrition department alone is permitted to issue orders on the store for food products. This means that all ward, private ward, infirmary and operating room orders for food are sent directly to the department office. Thus ginger ale, grape juice, orange juice, butter, eggs, scraped beef, etc., are sent out to the wards in the 9 o'clock baskets. The weekly orders of staples go out in a similar way on a definite day of the week. There is thus a centralized hospital control, applicable also to colleges and similar institutions. In fact, the University of Chicago has an organization, fundamentally the same, controlling the store, kitchens and dining rooms.

All orders on the store must be given to the store keeper by one o'clock of the day preceding use. The orders are filled in the afternoon, a check mark entered after each item when it has been weighed or counted. When the storekeeper issues the food the next morning, he again checks each item.

The dietitian has kept the duplicate of the daily store order and adds her check when she receives the specified article. Frequently she has to go to the store for articles which the storekeeper has double checked but

TABLE 6

Winter—Monthly Food Chart

Meat, fish, poultry

	NUMBER OF TIMES SERVED	
	Doctors and nurses	Employees
Bacon	11	10
Beef:		
Cold roast, five rib	2	0
Roast, five rib	2	0
Steak, rump	2	0
Braised, bottom round	2	7
Pot roast, bottom round	1	2
Corned, briskets	2	3
Stew, undercuts	0	1
Pie with vegetables, undercut	1	1
Croquettes	1	1
Creamed, chipped beef and peas	1	1
Chicken:		
Fricassee, roosters	1	1
Creamed, roosters	1	1
Salads, roosters	1	1
Fish:		
Salt cod creamed	2	2
Fish cakes, salt cod	2	2
Glouchester, salt cod	1	1
Boiled, salt cod	0	1
Fille of Sole	1	0
Sardines	1	0
Finnan Haddie	1	1
Cod	3	5
Salmon, chilled	1	0
Haddock	0	1
Frankfurters	1	1
Ham:		
Baker	2	2
Minced with scrambled eggs	1	0
Minced with rice in peppers	1	0
Cubed and scalloped with rice	0	2
Lamb:		
Roast, spring legs	2	1
Chops, spring racks	1	0
Fricassee, spring fores	1	1
Stew, spring fores	1	1
Kidneys, fresh	1	1
Pressed, breast	1	1
Liver:		
Lambs	1	0
Beef	0	1

TABLE 6—*Continued*

	NUMBER OF TIMES SERVED	
	Doctors and nurses	Employees
Pork, roast—loin	2	2
Sausage	4	4
Spareribs, corned	1	0
Tongue, Ox	1	0
Veal:		
Roast—milk fed	2	2
Loaf O ham and veal	1	1
Creamed—cubed with eggs	1	0

not delivered. There is never any difficulty when this occurs with properly trained personnel. In transitional development, the market order book and the index visible file immediately clear up all questions.

A physical inventory should be taken the last day of each month by the storekeeper and a dietitian from the nutrition department. This, entered in red ink to distinguish it from the daily receipts, on the respective cards of the index visible file must agree with the balance on hand, as shown by the perpetual inventory.

Consumption control

Office, store and requisition control are the foundations for growth and development in the department since they assure accurate records of consumption. However, the control of the amounts consumed hinge on more detailed facts. The calculation of the store requistion is based upon (1) the meal count, (2) seasonal group variation, (3) the distinctive characteristics of raw products and the method of preparation.

1. The actual meal count for the three main dining rooms shows the influence of the hospital organization and holidays on meal attendance. The meal count determines the menu for the month. For instance, when lamb and pork products are unreasonably high and yet must be used to secure variety, we plan them the exact number of times required by the monthly food chart but on the days the meal count is smallest. (The food chart determines the number of times each article of food is ordered for the month.) In this way, the pounds of the expensive cuts of meat per month are reduced and the pounds of the cheaper cuts increased. Thus, the average price per pound per total meat consumption remains practically the same each month of the year.

2. Records of consumption and plate waste show that there is a marked

variation during the Spring, Summer, Fall, and Winter. Therefore, the seasonal average ounces of meat and vegetables per person is calculated for the respective dining rooms. Additional accuracy is thus secured since the charts of food consumption show, for example, that the employees require a third more meat than the nurses, and that vegetable consumption varies with the likes and dislikes of each group.

3. These same records of consumption and plate waste show the amounts needed for specific foodstuffs according to their method of

TABLE 7

Winter—Monthly Food Chart

Vegetables

	NUMBER OF TIMES SERVED	
	Doctors and nurses	Employees
Asparagus	2	0
Beets	2	4
Beans, string	3	5
Cabbage	2	2
Carrots	3	3
Celery	4	0
Corn	2	4
Cucumbers	1	0
Lettuce	16	0
Onions	1	1
Parsnips	2	3
Peas	3	4
Radishes	3	0
Spinach	3	4
Squash	3	3
Tomatoes	5	5
Tomatoes, fresh	2	0

preparation. For example, the following amounts of beef, used by the same group of people, show the influence of the cut and preparation of the meat on the quantity required.

	pounds
Corned beef-brisket	125
Pie with biscuit crust (undercuts)	115
Meat loaf (undercuts)	65
Braised beef (bottom round)	104
Steak (rump)	130

During the month of May, 1925, we found the cost of different cuts and kinds of meat for dinner to range from the least expensive to the most expensive as follows:

Preparation	*Cuts of meat*
Corned beef	Corned beef briskets
Braised beef	Bottoms of round
Roast veal	Milk fed veal legs
Baked ham	Shankless Scotch ham
Roast beef	Five ribs and bottom round
Fricassee chicken	Fowl
Roast lamb	Spring lamb legs
Broiled lamb chops	Spring lamb racks
Steak	Rump
Steak	Loin

But in July the price of lamb chops rose, thus reversing the relative cost of steak and chops. These facts are mentioned to show that the dietitian must personally follow the market.

CALCULATION OF SIZE OF ORDER FOR PERISHABLE FOODS

The dietitian must base her market order on the daily meal count, the menu, the meat and vegetable charts, and the quantity of supplies in the store. On the morning of the market day, she, therefore, makes a list of the articles and amounts in the store ice chests. Then in her office, she makes a list of foodstuffs required by the menu noting opposite each the amount on hand in the store. She then enters the needed items in the market order book. Comparing the day and meal when the food was last served with the proposed time, noting the amount used for the recorded meal count at that time, as well as the number served the past three weeks on the proposed day it is to be served determines the amount to enter opposite each item in the market order book. In other words, the card footed Beef-Five Rib-Roast shows it was served on Wednesday, June 17, to the doctors and nurses, that 133½ pounds net raw meat was used by 115 people and 4 pounds cooked left over that Wednesday, July 8th, 118½ pounds net raw meat was used by 144 people with 18 pounds cooked left over. This reduction of 15 pounds of meat despite an increase of 29 people, served on July 8 as compared with the holiday consumption on June 17, was due to better meat carving control secured by showing the chef the records of meat consumption and meal count for the past 8 months. Therefore, 110 pounds are ordered for Tuesday, July 14.

Wednesday, June 17 (holiday).....115	Tuesday, June 16.....163
Wednesday, June 26.....169	Tuesday, June 23.....179
Wednesday, July 1.....163	Tuesday, June 30.....166
Wednesday, July 8.....144	Tuesday, July 7.....159

The physical inventory and the amounts consumed for the past two months as shown by the index visible file determines the size of the order of monthly staples.

Nor is the yearly contract for fruits and vegetables a difficult problem if we have a record of the last year's contract and the amounts on hand at the present date of contracting.

SELECTION

All food selections should be based on the price, quality and service of the dealer. Coöperation should be the keynote of our attitude, so that we extend the same courtesy and consideration that we wish to receive. If we strive to be fair to each dealer in proportion as they strive to please, we have a common meeting ground at once. Remember that to be fair we must be unbiased and, therefore, should never permit an unscrupulous representative of any firm to speak ill of a competitor. Welcome all information concerning food products, but do not accept it as a fact until you have checked and rechecked it with other dealers and verified it through your reading and personal observation. This does not mean that you doubt their word, rather that you realize the prevalence of individual interpretation of facts and prefer to make your own decision regarding each new one presented to you.

Perishable supplies

Market quotations for each product should be received the morning of the day selections are to be made from at least two firms. They should be based upon accurate specifications as:

	KIND	PACKAGE COUNT	GRADE	GROWERS	BRAND
Lettuce	Native	18 heads			
	New York	24 heads			
	Iceberg	4–4½–5 dozen			
Oranges	California	200	Fancy		
	Florida	216	Golden		
		176	Russet		

Since quality is the determining factor, personal selection is most important. It is best to look at the lowest priced product first, so that if it has all the essential qualities and characteristics of the specific foodstuff, the order can be placed at once. Where quotations are the same or very similar, both dealers should be visited. It is a dangerous practice to accept without investigation quotations that are noticeably under the market. Offered by a reputable firm, these prices are given as a bait to secure the business of the institution you represent, for gradually as your confidence is won their quotations will equal those of the competitor. Otherwise, if the product is not of inferior grade or quality it means that the firm has made a clever deal and they are passing it on to their customers. It is false economy to pay a low price on the current market for products of inferior quality.

The selection of meat or poultry is exacting and difficult. Even market men with constant practice are frequently misled to expect quality when none is there. Accurate specifications for the day's market quotations are as essential for these as for the perishable foodstuffs. But quotations are a poor guide for selections unless we ourselves know there is as much difference in the appearance of a full corn-fed, half corn-fed, or grass-fed steer as there is in different qualities of velvet. And that each cut must be judged by the weight, color, grain, texture, and marbling of the flesh, color of the fat, age of the animal, as shown by the proportion of red honey-combed bone and the time it has been killed. Too frequently specifications give a false sense of security since unscrupulous dealers will give a very low price to under-bid competitors and fill orders with goods that are far from the stated quality. Therefore, if it is impossible to go to the market, the equivalent time necessary to make selections should be spent by the buyer when goods are received and the cuts which do not meet the specifications returned at once. A dealer will not substitute more than once and his quotations will be based upon the quality desired if this practice is observed.

A monthly order of staples cuts down the number of confirmation orders, stamps, and stationery as well as the stenographer's time and that spent by the storekeeper in receiving the supplies.

A yearly fruit and vegetable contract represents an investment of thousands of dollars. It should be awarded only after an intelligent comparison of the samples and prices submitted. Yet one of the largest hospital syndicates for purchasing supplies decides from the price alone and never cuts a can. Dealers cannot quote intelligently unless they have definite specifications. Without these, one firm may quote on

number 3 sieve-cut refugee beans, another on 3 and 4 cut refugee beans, and another on number 2 and 3 cut refugee beans. This does not offer a fair basis for price comparison.

When cutting out samples, whether fruit or vegetables, we determine the drained weight of each can; the color, flavor consistency and grade of the contents and the amount of liquid. This necessitates checking; for fruits, the degree of syrup as it cuts according to the Brix or Balling scale and for certain vegetables such as peas and beans, the sieve. The Bureau of Chemistry, U. S. Department of Agriculture, specifies the drained weight for each product and size of can. The Bureau also gives a clear explanation of the method necessary to secure this drained weight. The method used for peaches is illustrative of that for all canned fruits. "To determine drained weight the contents of No. 10 cans should be emptied on a circular $\frac{1}{8}$ inch mesh screen, 12 inches in diameter, set in a frame with a vertical side higher than the level of the product on the screen. The contents of the can should be distributed over the screen so as to form a layer of uniform depth, this being accomplished, so far as possible, by the manner of emptying the can. When necessary, peaches in halves should be turned over with the pit side down to permit draining of any liquid present in the pit cavity; this should be done in such a way as to express no additional amount of liquor from the material. The period of draining should be two minutes. The screen for No. $2\frac{1}{2}$ or smaller cans is also $\frac{1}{8}$ inch mesh, but 8 inches in diameter."[2] It is interesting to note the variation in the contents of sample cans as they cut out as compared with their respective cost when a contract is to be awarded for string beans. Brand 2 was decided upon for the employees and ward children instead of Brand 1 because the sample contained 9 oz. drained solid more to the can of $6\frac{3}{4}$ pounds to a dozen cans, and cost $4.75 less per dozen. The color, salt, flavor, sieve, and consistency of Brands 1 and 2 were equal. Wax beans also were ordered for the employees and children because they have less variety of vegetables during the winter months than the nurses. Brand 4 was selected for the nurses instead of Brand 5 because the color, salt, flavor and consistency of contents were very similar; the sieve was the same while Brand 4 gave $8\frac{1}{4}$ pounds more drained solids per dozen cans at $4.00 less per dozen than Brand 5.

All the cans of each fruit or vegetable should be compared at the same

[2] Item 342—Reprint from Service and Regulatory announcements, Chemistry 26, United States Department of Agriculture.

TABLE 8

BRAND	DESCRIPTION	SIZE CAN	CANS TO CASE	COST (DOZEN)	CAN (LIQUID)	CONTENTS (SOLID)	COLOR	SALT	FLAVOR	CONSISTENCY OF CONTENTS	CONTRACT AWARDED
Brand 1	Cut, Refugee, #3, Sieve	#10	6/10	$12.50	43 ounces	3 pounds 7 ounces	Good green	Very little	Slightly acid	Fine, slightly tough	No
Brand 3	Cut, Stringless, #3 Sieve	#10	6/10	7.75	39 ounces	4 pounds	Good green	Very little	Good	Tender	Employees and wards
Brand 3	Fine Cut, Wax, #4, Sieve	#10	6/10	9.25	38 ounces	4 pounds 1 ounce	Good golden	More salt	Good	Both tender and coarse	Employees and wards
Brand 4	Cut, Stringless, #2 and #3, Sieve	#10	6/10	11.25	37½ ounces	4 pounds	Good green	Very little	Good	Smaller and more tender than Brand 5	Nurses
Brand 5	Cut, Refugee, #2 and #3, Sieve	#10	6/10	15.25	45 ounces	3 pounds 5 ounces	Good green	More salt	Best because of salt	Tender and small	No

time. That is, never cut out samples unless those from other firms are there to be compared. Never compare samples or decide to whom the contract is awarded when any of the representatives of firms are present. Take the necessary time when alone to weigh the collected data in comparison with the price per dozen and make a fair decision.

MEAL PLANNING

Scientifically planned menus must meet the need in protein, fat, carbohydrate, vitamines, salts, and total calories. They must be planned for large groups from the standpoint of (1) the economic factor, (2) variety, (3) coördination of the meals for the several dining rooms, (4) sequence of foodstuffs as related to preparation and service. Meal planning becomes monotonous and difficult unless we constantly observe these points.

1. In many hospitals the per capita cost presents a great handicap in securing dainty, palatable meals. We cannot afford to overlook the aesthetic appeal in every meal even though the nutritional needs are carefully met. This is easily secured on a low per capita in summer because of the great variety of fresh fruits and vegetables. But, in the winter too low a per capita presents a difficult problem. Garnishes, relishes, condiments and salads are desirable the year round, but are indispensable during the cold, gray months if the meals are to please both the eye and the palate. The value of a harmonizing color scheme and the observation of all holidays cannot be over-emphasized.

2. A four-week series of menus replanned the beginning of each season secures the greatest variety in foods and methods of service. It is a specific factor in the economic control and saves valuable time in planning. The first series of four weeks takes more time than the usual weekly method because it is necessary to have no duplication of prepared desserts and the meats and vegetables must be used according to the monthly food chart. After that the length of time required in planning each week's menus will be cut at least in half.

3. We must plan with equal care the coördination of the week's menus for the various groups (doctors and nurses, employees, wards and guests). For example, if roast beef has been planned for Tuesday for the doctors and nurses, it is used also for the guests and braised beef for the employees and wards; if roast lamb is used for Wednesday, fricassee of lamb would be used for the wards and employees. One dish is used as the basis for the several dietaries when possible, for example, lemon jelly for the em-

ployees can have whipped cream served with it for the doctors and nurses, while this same foundation with the addition of whipped cream or egg white can be used as bavarian cream or lemon sponge for the guests and private ward patients. Plan for the whole day as a unit rather than for the individual meal.

It is wise to distribute the protein, fat and carbohydrate throughout the day so that no meal will have a preponderance of one kind of foodstuff. For example, meat served with macaroni and cheese concentrates the protein in one meal; potatoes with rice concentrates the starch. With the exception of a few staples such as bread, butter, and milk avoid planning any food twice in the same day. Try to avoid planning any food which gives character to a dish twice in the same meal; such as vegetable soup and escalloped tomatoes at the same time, or tomato bisque and pickled beets.

4. Again, a four week series of menus effects a sequence of foodstuffs more accurately related to the capacity of the equipment in the kitchens, bakeshop, and serving rooms, and to the number and type of employees. Planning menus week by week on the basis of the 28 day month eliminates the following errors: croquettes for supper one day and cod-fish cakes for breakfast the day following makes a difficult day for the chef; or french toast, fritters, croquettes, french fried potatoes planned for the same week not only give the chef too much deep fat frying but also requires so much fat that the fat rendered from the week's supply of meat is inadequate and lard or cooking oil must be ordered from the store. Sherbet and vegetable combination salad served for supper make the meal hour hectic for our serving room personnel. Apple pie and doughnuts with the routine desserts, muffins, and breads give the baker a strenuous day. Example after example can be given showing how we adjust our menu to the employee and equipment routine necessitated by the department budget. This is done without lessening the aesthetic appeal or the nutritional value of the meal.

A nutrition department headed by a true executive and backed by an adequate and thoroughly competent staff is bound to secure results as long as the above principles are carried out. It is wrong to hold the dietitian responsible for the finished product unless she has absolute control of all detail from the minute the menu is planned, that is, through the stages of food selection, preparation, and service, as well as all data, forms, and records essential for the growth of the department. Too much emphasis cannot be placed upon the necessity and the fairness of this method of organization. Executives of efficiently operated factories

or steel mills do not expect results until their employees have been furnished with the proper tools. The selection of raw foodstuffs by the dietitian making the menu and facilities for keeping adequate, accurate records are the tools commonly withheld from the nutrition department. It is not fair to expect results when the materials upon which we are to work are selected by another having different ideals and natural tendencies and when the records upon which we base the development of the department are either inaccessible or unknown. Dietitians themselves are to blame for this condition. We lack either the courage of our convictions necessary to present this need to our executive or the knowledge that it is our duty to do so. Dr. S. S. Goldwater, Director, Mount Sinai Hospital, New York City, states in the June, 1925 issue of the American Dietetic Association Journal:

> Now that professionally trained dietitians have taken control of the dietary situation in so many hospitals, it is for them, with their intimate practical experience and special knowledge of the subject, to enlighten us others on this important phase of hospital work. The cost of food equals about a third of the total expenditure of the average hospital. This indicates the great economic importance of the dietary department.

In our Children's Hospital of Boston, the first annual report of the nutrition department ever submitted to the Superintendent and Board of Directors was written at the end of the fiscal year 1925. Detailed records such as we have described had been in use only from July, 1923, but monthly per capita calculated on the basis of actual raw food consumption were available beginning June, 1923; previous to this, per capita determinations were made from the monthly total food bills and physical inventory. This latter method prevented any detection of pilfering or control of food preparation or plate waste. Aside from the fact of greater satisfaction in the meals as they were served to the patients, nurses and doctors, guests, and employees from July 1923, the following economic results focused the attention of the Superintendent. The average per capita of raw foodstuffs (i.e., cost per person per day) for the twelve-month year was reduced from

$.526	1920	$.413	1923
$.460	1921	$.404	1924
$.452	1922		

despite the fact that the ratio of adults to patients had increased nearly 35 per cent; this increase was due to enlarged research and outpatient

facilities as well as larger personnel necessitated by operation of the infant's hospital with our staff. In 1924 our detailed records enabled us to calculate the per capita for the ward children, private ward children, and infants on the basis of actual food served. We found it to be

Ward children	$.25
Private ward children	$.42
Infants	$.21

as compared with $.404 for the entire hospital. The years 1920, 1921 and part of 1922, the dietitian was handicapped by inadequate control since she did not hire her employees, select the raw foodstuffs or have any therapeutic responsibility. All food purchases were made by the dietitian beginning June, 1922, and in 1923 a third assistant was permitted and also a recorder and stenographer so that department records and data were possible. The results speak for themselves.

Therefore, dietitians need to remember that:

1. Accurate records are of inestimable value in securing an efficient organization.
2. Hospital superintendents expect us to state what is needed after we have carefully and accurately worked out the method.
3. We must control every step essential to food preparation and service.
4. Final results depend upon diplomacy, patience, time, and a sound foundation.

A FOOD DISTRIBUTION LEDGER SHEET

E. A. GEORGE

Chairman, Sub-Committee, Administration Section American Dietetic Association

Hospital superintendents and dietitians are interested in comparing their food costs with those in other institutions of similar size and type. Frequently, the figures that are available are of little significance and are difficult to compare because of the wide variation in methods of establishing food costs.

Superintendents and dietitians are also primarily concerned in securing a diet which shall meet the nutritive requirements of staff and patients. No attempt is made in most hospitals to group the foods according to their nutritive contributions to the diet. A per capita cost of forty-six cents in one institution may provide an adequate diet. A per capita cost of fifty cents in another institution may be so expended that the diet is lacking in important constituents.

A committee of the Administrative Section of the American Dietetic Association has prepared the following food issue list which may be of value in these two connections. First, it offers a simple method of keeping raw food costs which lends itself readily to comparative study within each institution from month to month and among similar institutions. Second, it furnishes, through its grouping of the foods according to their nutritive contributions, a method for determining the adequacy of the diet. The percentages of expenditures for raw food in each group have an approximate relation to each other if the diet is properly balanced. For instance, an average of these percentages in certain hospitals in which the diet is adequate is approximately as follows:[1]

		per cent
Group I.	Meat, fish, eggs, poultry	28
Group II.	Milk, cream	21
Group III.	Vegetables and fruits	23
Group IV.	Bread and cereals	11
Group V.	Fats, sugars, and miscellaneous	17

Per capita raw food cost varies with the type of hospital, the season, and many other factors, but if combined with the *percentages* of that

[1] See also Iowa University Hospital figures. Jour. Amer. Diet. Assoc., June, 1926.

FOOD DISTRIBUTION LEDGER

	OFFICERS, STAFF, NURSES, AND PRIVATE PATIENTS			EMPLOYEES			WARD PATIENTS ON REGULAR DIET		
	Times served	Amount per person per serving or per day	Amount per 100 persons	Times served	Amount per person per serving or per pay	Amount per 100 persons	Times served	Amount per person per serving or per day	Amount per 100 persons
		ounces	*pounds*		*ounces*	*pounds*		*ounces*	*pounds*
I. *Meat, fish, eggs:*									
Beef and veal	315	7	44–50	430	7	44	275	6	38
Mutton and lamb	100	7	44–50	100	7	44	105	6	38
Pork	35	7	44–50	50	8	50			
Ham and shoulder	50	8	50	50	8	50			
Poultry	60	16	100	12	12	75	12	12	75
Fish, fresh	50	8	35–50	50	8	50	50	8	50
Fish, salt	35	3	19	35	3	19	55	2	13
Eggs	365	1½ eggs	13 doz.	250	1½ eggs	13 doz.	250	1½ eggs	13 doz.
Cheese	35	1	6	70	1	6	50	⅛	1
II. *Milk:*									
Milk	365	16	100	365	16	100	365	16	100
								32	200†
Cream	365	2	13						
Cocoa	115	¼	1½	95	¼	1½	80	¼	1½
III. *Vegetables and fruits:*									
Vegetables, dried—peas and beans	190	1½	9	185	1½	9	185	1½	9
Canned vegetables	125	4	25	125	3	19	105	3	19
Stock—root	150	5	31	200	5	31	185	5	31
Fresh vegetables	485	5	31	100	6	38	150	6	38
Potatoes	365	10	63	365	10	63	365	10	63
Dried fruits	75	1½	9	250	1½	9	250	2	13
Canned fruits	200	4	25	100	4	25	100	4	25
Fresh fruit	550	4	25	100	5	31	150	4	25

IV. *Bread and cereals**									
Bread	365	8	50	365	12	75	365	10	63
Flour, all kinds	365	6	38	365	3	19	365	1	6
Cornmeal and hominy	80	1	6	80	1	6	80	1	6
Oats, rolled and meal	180	1	6	80	1	6	200	1	6
Rice, macaroni, spaghetti	125	1	6	110	1	6	210	1	6
V. *Fats:**									
Butter or butter substitutes	365	1½	9½	365	1½	9½	365	1½	9½
Lard or Crisco	130	1	6	130	1	6			
Oil	100	1	6	75	1	6	75	1	6
Bacon	100	2	13	50	2	13	50	2	13
Salt pork	15	3	19	50	3	19	30	3	19
Sugar:									
Sugar	365	3	19	365	3	19	365	2½	16
Jam and jelly	80	1	6	50	1	6	50	1	6
Mollasses and syrup	70	1	6	70	1	6	50	1	6
Miscellaneous groceries:									
Coffee	365	1	6	365	1	6	365	½	2
Tea	365	⅛	1	365	⅛	1	365	⅛	1
Salt	365	½	3	365	½	3	365	½	3
Pepper (in year)		2	12		2	12		1½	9
Spices (in year)		½	3		½	3		½	3
Extracts (in year)		8	50		8	50		8	50

* Groups IV and V combined represent the fuel foods.

† Light diets.

cost represented by these main groups of foodstuffs, it furnishes a suggestive index of the character of the diet and a basis for intelligent increase or decrease in the amount spent for food. Comparisons between institutions are significant in sections where similar wholesale prices prevail.

The food distribution sheet is usable for the daily issue order since it indicates the number of ounces per person of the various foods commonly issues for adults. It also includes a suggestion as to the number of times these items should be served during the year. While these are approximate figures, they assure an adequate diet for ward patients and employees. Allowances for staff, nurses and private patients are more liberal in order to permit of greater variety of flavor and preparation.

There is a growing tendency in hospitals to establish a budget for the dietary department. The food distribution sheet will serve to estimate quantities required for a year. By using current prices and the quantities thus estimated, an approximate figure may be reached for the raw food item on the department budget. These quantities will also be useful in buying "futures."

EQUIPMENT FOR A HOSPITAL KITCHEN

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From the standpoint of the administrator the most logical place to begin to equip a kitchen is with the floor. No one unit of her equipment requires more care, nor pays better dividends for forethought in planning than it does. Most of us have at one time or another struggled with porous concrete or terazza into which every particle of spilled grease seems to be absorbed; with brittle white tile, beautiful when clean but when wet a constant menace to the life and limb of your employees; or with that joy and pride of the old-time kitchen, a white pine floor.

Eliminating unlimited hours of back-breaking labor and unceasing complaints from employees about tired feet, we have been given the red quarry tile floor. For beauty it can not be surpassed; for the comfort of the worker it is at least the equal of wood; its ease in cleaning is a virtue and, after six months of constant use, we have still to find a spot or a stain upon its surface which can not be removed by a good brushing with soap and water. Combined with judicious sloping to centrally located drains, this floor provides a foundation so suitable that the most exacting administrator must feel she has a very adequate basis to build upon.

Working upward to the equipment itself, the bases or standards first bring themselves to our consideration. White porcelain enamel legs, lifting equipment well off the floor and fitted with adjustable feet, are most desirable. This allows every piece of equipment to be set perfectly level upon a slanted floor and obviates the necessity of using unsighty and unsanitary "shims."

For convenience, sanitation and permanence the availability and construction of sinks will be of primary importance. They may be constructed of 12 or 14 gauge galvanized iron, having a 10- or 12-inch splash back, mitred edges securely riveted, heavy gauge sloping drain boards of the same material and rounded inner corners to allow for ease in cleaning. We have found that a $\frac{3}{4}$ inch galvanized iron pipe, split at the joint and forced into place over the working edges of the sinks and drainboards, aids materially in the ease with which employees may work

long hours over them. Galvanizing after fabrication is desirable from a sanitary standpoint.

Ranges vary so much according to the fuel used in the locality in which you are situated that only a few important features can be emphasized. A heavily constructed working surface, smoothly made to allow for ease in moving about large pots; heavy ovens; spreader plates if possible between ranges; warming shelves above and water faucets which swing to all sections of the ranges are primary requisites. A broiler in connection with the stove should have an adjustable grid, a warming cabinet and a removable drip pan.

If ranges and stationary steam fitted equipment are to be in close conjunction, a separating wall is advisable. This not only prevents a rush of steam toward those working at the ranges, but protects the workers at the steam line from the intense heat of the stoves.

We find adequate for our 300 bed hospital the following steam units: First, a heavy cast iron meat roaster, next to a four compartment steamer of the same material. Each compartment in this unit is separate, thus preventing the mingling of odors in cooking. Each has its own steam supply independent of the other compartment. Next, two steam jacketed kettles each of 50-gallon capacity have outer bodies of cold rolled copper with inner kettees of $\frac{1}{4}$ inch pure English block tin, hand riveted. Each is not only fitted with a supply and return of steam, but has hot and cold water piped to it, eliminating the necessity of carrying water. Near this, a two compartment cereal and pudding cooker is placed. This is also constructed of copper and acts upon the principle of the double boiler, being fitted with two removable monel metal containers of 10 gallons capacity each. A supply and return of both water and steam are provided. We have found this to be an especially valuable unit.

Cooks' work tables with heavy monel tops are found to be extremely practical. No stains are absorbed and this metal does not rust as do ordinary steel tops. A long combination work table and bain marie, also of heavy monel, placed parallel and in close proximity to the ranges, will be very valuable to the cooking staff.

Whenever possible the placing of pot washing in a separate room is advisable. As too many of us know, a corner provided for this purpose in the main kitchen is forever an unslightly spot. Isolated in a nearby room by himself, with a properly arranged double sink, having double drainboards and a ventilated rack for pots and pans, the most irritable of pot washers soon developes a certain amount of pride in his own room

and repays you with better service and a kindlier spirit toward the other employees.

Vegetable and fruit preparation also seem more satisfactory when assigned to a room of its own but should of course be in close conjunction to the kitchen. In this room may be placed the potato parer, food chopper, deep sinks, chopping tables with heavy maple tops, and other necessary equipment. Whenever possible a tilted bin with separate compartments having a hinged top should be provided for such vegetables as are in constant use and which need not be kept refrigerated.

If the refrigeration be of the circulating brine type, the upright stationary ice cream freezer, brine jacketed and electrically operated, is most desirable. With this should be provided a circulating brine hardening carbinet into which packers filled at the freezer may be slipped. The ease of operation, the freedom from handling ice and salt, the efficiency obtained in time and labor saved and the perfection of results more than warrant the initial expenditure.

Three other very essential pieces of equipment which are great labor savers are the meat slicing, mixing and burnishing machines. These are so commonly known and so widely used, with the possible exception of the last named, that mention of them scarcely seems necessary. The burnishing machine most adequately proves its value where central service, which requires large, heavy pieces of tray silver, is used.

The equipment for the serving of food to patients, nurses and employees depends so completely upon the needs of the institution that only a few salient points can be brought out. Adequate facilities for keeping food hot of cold as necessary, use of those materials in construction whose ease in cleaning is notable, and simplicity in operation should form the keynotes for such equipment, whatever the type of service may be.

PREPARATION OF LIVER FOR PATIENTS WITH PERNICIOUS ANEMIA. II[1]

HAZEL BRADBURN

Student Dietitian, Barnes Hospital, St. Louis, Missouri

Liver Salad or Sandwich Filling

Liver 120 grams (cooked weight)
Celery (raw) 60 grams
Carrots (raw) 40 grams
Onion (raw) 45 grams
Salt 5 grams

Boil liver until tender. Put through a grinder together with the carrots, celery and onion. Add salt and mix with boiled salad dressing. This may be served on a lettuce leaf as a salad or as a sandwich filling.

Boiled Dressing

Egg 50 grams
Vinegar 20 cc.
Sugar 10 grams
Water 20 cc.
Salt 1 gram
Cream 10 cc.

Beat egg thoroughly. Add salt, sugar, vinegar and water. Cook in a double boiler until thick. Add cream when mixture is cool.

Sweetbread Salad

Sweetbreads 100 grams (cooked weight)
Gelatine 10 grams
Cold water 20 cc.
Fresh cucumbers 20 grams
Vinegar 15 cc.
Raw celery 20 grams
Hot water 150 cc.
Salt 2 grams

Boil sweetbreads in 400 cc. of water to which salt has been added. Dice and mix with chopped cucumber and celery. Soften gelatine in 20 cc. of cold water, add vinegar and 150 cc. of hot water. Pour over other ingredients and mold. Serve with boiled salad dressing or mayonnaise made with mineral oil. This recipe makes two large salads.

[1]The first article in this series by Thelma Tubbs, B.S., and Elizabeth Bellinger, B.S., appeared in the JOURNAL OF THE AMERICAN DIETETIC ASSOCIATION, December, 1926.

Liver Salad Dressing

1 egg (50 grams)
Mineral oil 200 grams
Salt 2 grams
Lemon juice 20 cc.
Liver 50 grams (cooked weight)
Onion 30 grams

Beat egg well. Add oil a teaspoonful at a time until five teaspoonsful have been used, beating well between each amount. Add remainder of oil slowly, beating constantly. Last add salt, lemon juice, onion minced and liver ground fine. This recipe makes about three-fourths of a pint of dressing.

Omelet and Lamb's Kidneys

Lamb's kidney 100 grams
Egg 50 grams
Onion 25 grams
Milk 20 cc.
Salt 3 grams
Butter 2 grams

Separate yolk from white. To yolk add salt and milk and beat until thick. Beat white of egg until stiff. Fold into first mixture with ground onion. Butter sides and bottom of baking dish and pour in mixture. Cook slowly until omelet is delicately browned on bottom. Place in oven to finish cooking on top. Boil lamb's kidney until tender, cut into slices and use as a garnish around the omelet. Onions may be left out if served as a breakfast dish. This recipe makes two medium-sized servings.

Baked Stuffed Tomato

1 tomato 100 grams
Liver 120 grams (cooked weight)
Onion 15 grams
Celery 20 grams
Salt 2 grams
Water 400 cc.

Boil liver in water until stock is cooked down. Remove from fire and grind the liver. Grind onion and celery and add to liver. Scoop out center of tomato, mix with other ingredients, add salt and stuff the mixture into the tomato. Bake in a slow oven until tender. This recipe makes one large serving.

Creamed Cauliflower with Liver

Cauliflower 120 grams (cooked weight)
Liver 100 grams (cooked weight)
Milk 200 grams
Flour 5 grams
Butter 10 grams

Boil cauliflower until tender. Melt butter, and flour and when well blended add milk and stir until thick. Pour over cauliflower. Boil liver until tender. Grind and serve as a garnish sprinkled over top of cauliflower. This recipe makes about two large servings.

Liver en Casserole

Liver 120 grams
Carrots 40 grams
Celery 60 grams
Onions 35 grams
Mushrooms 25 grams
Salt 5 grams
Bread crumbs 20 grams
Water 400 cc.

Calves, beef, chicken liver may be used.

Boil liver and when tender grind. Save stock in which liver was cooked. Chop or grind carrots, celery and onions. Add diced mushrooms. Mix all ingredients except bread crumbs, together. Put stock in a casserole, sprinkle top with bread crumbs and bake slowly until brown. This receipt makes four good sized servings.

Stuffed Baked Onion

1 large white onion
Liver 100 grams
Salt 2 grams
Water 400 cc.
Celery 10 grams

Boil liver until tender; save the stock. Grind liver and celery until very fine. Scoop out center of onion until onion weighs 100 grams. Stuff with ground liver and celery and bake slowly until onion is tender. This recipe makes one large serving.

Spanish Liver

Liver 120 grams
Onion 35 grams
Tomatoes 150 grams
Rice 20 grams (dry weight)
Water 600 cc.
Salt 4 grams

Cover rice with 200 cc. water and cook in a double boiler until soft. Boil liver in 400 cc. of water until tender. Cut into cubes. Dice onion. Combine all ingredients and mix with stock. Let simmer until it thickens. This receipt makes two large servings.

Carrot and Liver Salad

Liver 120 grams
Carrot (raw) 50 grams
Cabbage (raw) 50 grams
Salt 5 grams

Boil liver until tender, add salt. Remove and when cool put through grinder. Add chopped carrots and cabbage. Mix all ingredients with boiled salad dressing. Serve on lettuce leaf. This receipt makes about two medium sized servings.

EDITORIAL

In appointing the first editor for the JOURNAL OF THE AMERICAN DIETETIC ASSOCIATION the precedent was established that the Second Vice-President should become editor.

This year Mary Pascoe Huddleson, the second vice-president has been in Paris. She will return in September in time to take up her duties as editor for the post-convention number of the JOURNAL. Following Dr. Wheeler's suggestion made last year that one or more issues of the JOURNAL each year be given over to a group of workers as a special number the president has asked the New York Dietitians' Association and the Massachusetts Dietitians' Association to furnish material for the next two issues of the JOURNAL.

Mary de Garmo Bryan will edit the June issue of the JOURNAL for the New York Dietitians. Quindara Oliver of Boston will edit the September number of the JOURNAL for the Massachusetts Dietitians. Members of the American Dietetic Association and readers of the JOURNAL need no introduction to Mrs. Bryan and Miss Oliver. A real treat is in store. Renew your subscription and keep Volume III of the JOURNAL complete for your library.

FLORENCE H. SMITH, *President.*

To one that loves France and her people, and that has experienced the invariable kindness the French people offer to those who wish to understand them, it is endlessly fascinating to pass an unhurried year in their midst. Archaic they may be, in many ways, according to our American standards of comfort in living. In rainy weather in the villages, the middle of the street is the only possible way of avoiding mud, yet if cement sidewalks were put in, it might mean there would be no more wooden shoes! We should be so disappointed not to find them. In Paris, the housewife in many instances has to go to the water tap in the street for water. And today, in the banlieue (suburbs of Paris) the goats munch thriftily along the village streets and milk is delivered right on the spot from its caprine producer.

Central heating is rare indeed, but most efficient tiny wood and coal stoves, bearing romantic names, such as *La Perle*, and *Salamander*, are

connected to the fireplaces somewhat after the fashion of our Franklin stoves (Franklin may have acquired the idea over here). These are about 1½ feet square by 2 feet high, and are enameled in bright greens, blues or rose. One sees very little of the household labor-saving devices common with us. Yet Madame, who presides over the kitchen, is able to turn out rather elaborate meals with apparent ease.

It is a little difficult for an American stomach to become accustomed to the bounteous *déjeuner* and *dîner*. On the other hand the *petit déjeuner*, consisting of a *croissant* or a *brioche*, with either *café au lait*, *café nature*, or *chocolat*, is hardly up to our dietetic standards for the same meal. The *déjeuner*, consisting of *hors d'oeuvre*, omelet or fish, meat, a vegetable, and any one of a dozen varieties of cheese, followed by a dessert, and accompanied by quantities of bread is high in protein. The same may be said of *dîner*, consisting of a substantial soup (always based on meat stock), fish, meat, vegetable, one or more of the multitudinous cheeses, dessert, and coffee. Butter almost never appears on the table unless sardines are served as one of the *hors d'oeuvre*. No one ever drinks milk, at least not in public. Fresh vegetables and fruits available in the markets of Paris are much inferior (with one or two exceptions) to our winter supply in New York.

Judged by our standards of what seems dietetically good for Americans, the food habits of the French are rather appalling. Yet, remembering their achievements both military and artistic, it might be unwise to assume on a somewhat brief acquaintance that the French diet is bad for the French. From the standpoint of flavor and taste any little *maison* or restaurant can teach us a great deal about foods. France, having elevated cookery to the eighth Art, and with its Cordon Bleu, takes food preparation seriously. Even in the cheaper restaurants of Paris on the *rive gauche* food is always deliciously prepared. Flies may be cherished all winter long in some of these eating places, but the chef is an artist using foods as his medium of expression. We, as a young and therefore somewhat materialistic nation, are concerned primarily with the practical aspects of food; time may give us a greater insight into its aesthetic possibilities as well.

MARY PASCOE HUDDLESON,
67 bis, Ave. de l'Ouest,
Le Raincy, Seine-et-Oise, France.

Delay in Membership Action!

Who is to blame? The average time required for a new membership application to be passed by the Membership Committee is two months. However, we have known instances in the past when it has taken six months or a year to reach a final decision, due to a prolonged process of securing adequate and accurate data before voting could even start. It is our aim to bring the average time down to one month and it can be done with the support of every member.

The Membership Committee is composed of the Recording Secretary as Chairman, and two members appointed by her with the approval of the President. They must rank high in their profession through their experience and achievements and be willing to pass upon applications as soon as they are received. Last year, the Chairman was in Iowa City, one member in Boston, and the other in Seattle, Washington, so that it required a long time for mail to make a complete circuit. The Executive Board this year suggested that the members be within a shorter radius, as the first step in shortening the length of time to secure final action, with the result that the Committee is represented by St. Louis, Iowa City and Boston.

The following routine characterizes the path of an application from the time it is received at the office of the Executive Secretary in Chicago until it is returned to her by the Membership Committee for filing. Let us suppose one has been filled in by a dietitian, Anna States in Oregon, and forwarded to reach the office of the Executive Secretary, 25 East Washington Street, Chicago, Illinois, on Tuesday, February 1st. Here it is held until Saturday, February 5th, and forwarded with the other application blanks that have come during the week to the Chairman of the Membership Committee in Boston. February 7th, Anna States is notified by the Chairman that her application has been received and has been sent to the members of the Committee for action. Prior to sending it through the Committee, the blank must be checked (1) for endorsement by an active or associate member of the American Dietetic Association (2) accuracy (3) complete answering of all questions. If it passes on all these counts, it is sent to the member in Iowa City, who records her vote on the back of the blank thus, "Approve Active Membership, L. W. B. 2/25/27," and sends it on to the member in St. Louis, who records her vote in a similar manner and, under date of February 28, 1927, forwards it to the Chairman in Boston. Here, the final vote of the Committee as a whole is recorded on the front of the blank above

AMERICAN DIETETIC ASSOCIATION

APPLICATION FOR MEMBERSHIP

Date December 20, 1927.

Name Miss Jane Correct

Business address 309 Washington Street, Iowa City, Iowa

Permanent address 12 Warrenton Street, Madison, Wisconsin

(Please notify office of change of address)

Training:

Preparatory School Lapeer High School Years Studied 4 Diploma Yes Year 1914

College or University Univ. of Wisconsin Madison, Wisconsin Years Studied 4 Degree B.S. Year 1918

Course Home Economics Major in Foods and Nutrition

Graduate work:

1. University Teachers' College Columbia Univ., N. Y. Years studied 1 Degree M.A. Year 1921

Course Institutional Ad. Major in Nutrition

2. Other

Experience:

Student dietitian in Peter Bent Brigham Hospital of 225 Beds

Length of course 6 months Diploma Yes Month Oct. Year 1922

Other student experience

Positions held since student work; state references

Miss Louise Shoth, Supt., Jewish Hosp., St. Louis, Mo. Dietitian, Oct. 1922–1925

Dr. George Green, Supt., University Hospital, Iowa City, Iowa Nov. 1925 to present

Present official title Director, Nutrition Department with (name of firm)

Signature JANET CORRECT

Endorsement of Active Member of American Dietitic Association THELMA TUBBS, P.B.B.H.

The above application is approved / rejected for active / associate / junior membership

Chairman, Membership Committee

Date passed

No application considered unless accompanied by dues.

EXTRACTS FROM BY-LAWS

SECTION 2.—Active members. Any person possessing the following qualifications may be an active member of the Association by vote of the Membership Committee subject to approval by the Executive Committee.

A. Education:

(1) A bachelor's degree with a major in foods and nutrition from a recognized college or university.

(2) One year of such training in the cases of a person holding a bachelor's degree from a recognized college or university.

B. Experience:

(1) At least six months of successful experience as dietitian in hospital, cafeteria, lunch room, hotel or similar field. Such experience must include the carrying of responsibility as attested by some person in authority, or

(2) One year's experience, attested successful as above, in teaching professional subjects such as dietetics or nutrition to people looking forward to work in professional dietetics, or

(3) Published original investigation in nutrition

DUES

The annual dues shall be three dollars, payable at the time of the annual meeting.

the signature of the Chairman and dated 3/5/27. On March 8th, Anna States is notified that her application has been approved for active membership. This becomes effective at once since her dues are already in the office of the Treasurer. It has taken a total of thirty-six days for action.

Inadequate information delays the vote of the Membership Committee in proportion to the number of times the applicant must be written to for the necessary facts. Some of the most common errors are failure (1) to secure the endorsement of an active or associate member of the American Dietetic Association (2) to state correctly the name of the college (3) to state the year the degree was received (4) to give references for the positions held since graduation (5) to state the course and Major (6) blank received undated. If the applicant fails to secure the endorsement of a member, it is returned to her by the Chairman with several suggestions of associate or active members of the same state who would be qualified to endorse her blank and after it is returned, the blank is sent through the Committee. One of the dietitians wrote she had received her education at the College of Industrial Arts, without stating whether it was the one at Denton, Texas, or Chicago, or Oregon. Of course, her application could not be sent through the Committee until her reply concerning this question had been received.

The application for membership shown here is filled in correctly with the hope that ever member will study it carefully and make herself

responsible for the accuracy of the date on any blank which she has occasion to endorse.

Q. O.

A rather large number of teaching hospitals are trying out the plan for training dietitians adopted tentatively by the Association in Atlantic City on recommendation of the educational section. Several interesting modifications are developing. It is hoped that many reports will be sent to the JOURNAL for editorial comment. The Presbyterian Hospital in New York City, for example, is offering to experienced dietitians graduate work in affiliation with the College of Medicine and Teachers College of Columbia University. The details are given elsewhere in this issue. Women without experience who desire such work will have an opportunity to try themselves out in the hospital while taking graduate work at Columbia—in institutional management for example with Mary de Garmo Bryan—the laboratory work in certain courses being given in the hospital. The advantages of such a scheme are great. Women finally accepted as internes in nutrition will know what they are undertaking; they will have had training somewhat analogous in their own line to that of the medical student in his. Opportunities for advanced study for dietitians are gradually increasing.

R. W.

CURRENT LITERATURE

MAJORIE HULSIZER COPHER

American Journal of Diseases of Children:

October, 1926.

P. 483. The value of elementary phosphorus in rickets. Alfred F. Hess, M.D., and Mildred Weinstock, B.S.

P. 516. The basal metabolism and the specific dynamic action of foods in children in various conditions of nutrition. Agnes Fay Morgan, Ph.D., and Gladys D. Hatfield, M.A.

P. 524. Fruit and vegetable juices used in infant feeding. Eva Mae Davis, A.M., and Hannah A. Stillman, A.M.

P. 554. Growth standards. H. Gray, M.D., and F. Fraley, M.D.

November, 1926.

P. 641. Protein requirement as determined in diabetic children. Walter M. Bartlett, M.D.

P. 655. The effect of various supplementary lunches on the plasma carbon dioxide capacity of children. Agnes Fay Morgan, Ph.D., and Glatha D. Hatfield, M.A.

December, 1926.

P. 812. Growth in children with diabetes mellitus. W. S. Ladd, M.D., assisted by Charlotte S. Day, R.N.

P. 900. Progress in pediatrics: Heliotherapy and actinotherapy in relation to pediatrics. Frederick W. Schultz, M.D.

American Journal of Physiology:

October, 1926.

P. 437. Studies in uric acid metabolism. James F. MacDonald and Victor E. Levine.

November, 1926.

P. 666. Studies in avian diabetes and glycosuria. Theodore Koppanyi, Andrew C. Ivy, Arthur L. Tatum and Frederick T. Jung.

December, 1926.

P. 44. Early growth of chickens with special reference to ultra-violet light. H. D. Goodale.

P. 218. The effect of meat feeding on nursing mother rats and the rate of growth of their litters. F. A. Hitchcock.

P. 221. Studies of basal metabolism in New Orleans. R. Hafkesbring and P. Borgstrom.

P. 229. Study of the the protein intake as indicated by urinary nitrogen. P. Borgstrom and R. W. Post.

American Journal of Public Health:

November, 1926.

P. 1085 Legislation relating to fruit and vegetable preservation.

American Journal of Hygiene:

November, 1926.

P. 755. Bacterial flora of the market oyster. Calista Eliot, D. Sc.

Archives of Diseases in Childhood (British):

October, 1926.

P. 288. The day-and-night creatinine and creatine in the urine of infants. O. S. Rougichitch, M.D.

Archives of Internal Medicine:

September, 1926.

P. 279. The occurrence of benign glycosuria in diabetic families. J. E. Holst, M.D.

P. 385. The basal metabolic rate in cases of chronic cardiac disease and in cases of hypertension. Shepard Shapiro, M.D.

November, 1926.

P. 553 Chemial changes in the blood during fasting in the human subject. William G. Lennox, with the assistance of Marie O'Connor and Margaret Bellinger.

P. 590. The basal metabolism of the Japanese. Seizaburo Okada, M.D., Eiichi Sukurai, M.D. and Toshio Kameda, M.D.

P. 647. The regulation of the flow of bile and pancreatic juice into the duodenum. Glover H. Copher, M.D., and Shuichi Kodama, M.D.

December, 1926.

P. 736. Hyperthyroidism, Myxedemia and diabetes. Russel M. Wilder, M.D.

P. 770. The basal metabolism in beriberi. Seizaburo Okado and Eiichi Sakurai.

P. 779. The use of insulin by mouth. H. R. Miller, M.D.

P. 785 The growth of the long bones in childhood, with special reference to certain body striations of the metaphysis and to the roll of vitamins. H. A. Harris, M.D.

Archives of Pediatrics:

September, 1926.

P. 585. Pediatrics in maternity hospital, with especial reference to nursing routine. Walter Lester Carr, M.D.

October, 1926.

P. 631. Acidified milks in infant feeding. Victor E. Levine.

P. 659. Studies in nutrition: I. Food deficiencies. William Weston, M.D.

November, 1926.

P. 713. Studies in nutrition: II. Consideration of the food elements. William Weston, M.D.

Canadian Medical Association Journal.

October, 1926.

P. 1255. On diet and nutrition.

November, 1926.

P. 1301. An address on the universitys' function in medicine. Henry M. Tory, LL.D.

Hospital Management:

November, 1926.

P. 72. 9,000 meals served daily. Elizabeth Miller.

P. 84. Central linen service. Geraldine Borland.

December, 1926.

P. 59. What a hotel chef thinks about food served in a hospital. Alfred Fries.

P. 72. A highly organized kitchen.

P. 74. Hints on food service.

Journal American Medical Association:

October 2, 1926.

P. 1108. The prevention of rickets in premature infants. Henry J. Gerstenberger, M.D., John D. Nourse, M.D.

P. 1114. The effect of ultraviolet irradiation on the health of a group of infants Louis H. Barenburg, M.D., Irving Friedman, M.D., and David Green, M.D.

October 16, 1926.

P. 1253. Arthritis. Ralph Pemberton, M.D.

October 30, 1926.

P. 1463. Simple goiter and its prevention. David Morine, M.D.

November 20, 1926.

P. 1744. Acid milk and rickets.

December 11, 1926.

P. 1970. Breast feeding problems. C. Ulysses Moore, M.D., and H. G. Dennis, M.D.

P. 1973. Effects of diet on rickets. J. V. Greenebaum, M.D., T. K. Selkirk, M.D. Florence A. Otis, M.S., and A. G. Mitchell, M.D.

December 18, 1926.

P. 2052. Racial factor in basal metabolism. E. L. Turner, M.S.

P. 2086. A practical treatment of duodenal ulcer. Walter C. Alvarez.

December 25, 1926.

P. 2164. Physiologic availability of iron.

P. 2165. Some lessons of war-time undernutrition.

P. 2166. "Vegetable purines" and uric acid.

Journal of Biological Chemistry:

September, 1926.

P. 123. The antirachitic value of irradiated cholesterol. Alfred F. Hess, Mildred Weinstock, Elizabeth Sherman.

P. 273. Some nitrogenous constituents of the cauliflower bud. Mary C. McKee, Arthur H. Smith.

October, 1926.

P. 437. Studies on experimental rickets. XXVII. Variation of vitamin D content of butter fat as a factor in the development of rickets induced by diets suitable for preparing rats for the line test. E. V. McCollum, Nina Simmonds, J. Ernestine Becker, and P. G. Shipley.

P. 471. The relation of iron from various sources to nutritional anemia. Helen S. Mitchell, and Lola Schmidt.

P. 495. The nutritive value of inorganic substances. I. A study of the normal zinc metabolism with particular reference to the calcium metabolism. Lawrence T. Fairhall.

P. 587. Potassium in animal nutrition. IV. Potassium requirements for normal growth and maintenance. Harry G. Miller.

P. 639. Effect of hydrogen ion concentration upon the rate of destruction of vitamin B upon heating. H. C. Sherman, G. W. Burton.

P. 759. Sodium deficiency in a corn ration. Harry G. Miller.

Journal of Metabolic Research:

July–December, 1924.

P. 169. Fat soluble vitamins. J. H. Jones, H. Steenboch and M. T. Nelson.

P. 207. Experiments on the absorption of insulin from the rectum in human diabetics. S. Peskwid.

Modern Hospital:

October, 1926.

P. 71. How do you buy?

P. 132. What foods are popular with children?

P. 134. Saving time in ordering.

P. 134. Slicer cuts bread consumption.

November, 1926.

P. 134. Planning and equipping the kitchen. R. G. Brodrich, M.D.

December, 1926.

P. 51. Evanston provides for its domestic help. Carl A. Erikson, Ada Belle McCleery.

P. 104. Training the patient to be his own dietitian. Helen Nichols.

ASSOCIATION NEWS

MINNESOTA ASSOCIATION OF HOSPITAL DIETITIANS

The Minnesota Association of Hospital Dietitians held their meeting on Monday, November 15th, at 3:30 in the Faculty Room at Millard Hall, University Campus.

The following people were elected to office for the coming year:

President: Winifred Howard, Ancker Hospital, St. Paul.

Vice President: Edena Zavitz, Northern Pacific Hospital, St. Paul.

Recording Secretary: Ethel Swanson, Mounds Park, St. Paul.

Corresponding Secretary: Lois Hurlbutt, General Hospital, Minneapolis.

Treasurer: Louis Marty, Asbury Hospital, Minneapolis.

On the afternoon of December 13, 1926, the Minnesota Association of Hospital Dietitians enjoyed a social meeting at the home of Mrs. Armond Harris, 1777 Princeton Avenue, St. Paul.

The Minnesota Association of Hospital Dietitians met Janury 10th, in the Faculty Room at Millard Hall, University of Minnesota Campus.

The program was as follows:

3:00 Business Meeting.

3:45 Review of new Dietetic Books.
Miss Bethana Webb, Bethesda Hospital, St. Paul.
"Fundamentals in Dietetics," Wood and Weeks.
"Dietetics and Dietotherapy," Dr Wheeler.
Miss Hazel Fullriede, Student, University Hospital.
"Diabetes and its Treatment by Insulin and Diet," Patty and Stoner.
Miss Pearl Rose, Student, University Hospital.
"Diet for Diabetes," Campell and Porter.

4:30 Mrs. M. Letchell of Dennisons Paper Company.
Talk and Demonstrations, "Making Favors for Trays."

5:00 Round-table, "New Dishes and Menus."

6:30 Dinner at the Nicollet Hotel was served to thirty-four of the members. During dinner two nurses from Eitel Hospital, Miss M. Krietz and Miss V. Siebolds played the piano and sang. After the dinner the dietitians were shown through the kitchens.

MASSACHUSETTS DIETETIC ASSOCIATION

At the December Meeting of the Massachusetts Dietetic Association, a Nutrition Round Table was conducted with Miss Jean Reyner, Assistant Director of Food Clinic, Boston Dispensary.

All phases of the State and City Nutrition Program were briefly touched on by representative workers. It was an inspiring and live meeting giving as it did a comprehensive idea of the present intensive work being done throughout State and City.

Owing to inclement weather, the meeting scheduled for January with Dr. Donald Macomber, Research Fellow in Obstetrics, Harvard Medical School, Boston, was postponed until February.

ANNUAL MEETING OF NORTHWEST DIETITIANS

Dietitians of the Northwest, interested in hospital work, held their second annual conference at Olympic Hotel, Seattle, Washington, on January fourth. The forenoon meeting was held in conjunction with a meeting of the Northwest Hospital Association. Dr. L. J. Palmer, Seattle, talked on the subject of Diettherapy. He urged a closer coöperation between the medical staff and the dietary department for the benefit of the patient, stressing the necessity of the diet correctly ordered and the order correctly interpreted.

The hospital administrators were very interested in the question "What Responsibilities is the Dietitian in the Hospital Ready to Assume?" as answered by Miss Effie Raitt, Director of the Department of Home Economics in the University of Washington. She emphasized the importance on the part of the hospital administrator of selecting for hospital work the dietitian with proper theoretical training. The following is a general outline of courses recommended to the student who wishes to prepare for nutrition work in hospitals:

1. The fundamental sciences included in the general university course
2. General Home Economics
   a. Food Preparation
   b. Home Sanitation
   c. Dietetics
3. Business Administration
   a. Accounting
   b. Personnel Management
   c. Business Law
4. Related Courses
   a. Fine Arts
   b. Psychology
   c. Economics
   d. Sociology
5. Specialized Institutional Management Courses
   a. Quantity Cookery
   b. Institutional Buying
   c. Institutional Organization and Management
   d. Practice Work
6. Food and Nurtition, and Diet Therapy

The dietitians were entertained at luncheon at the Womens' University Club. Twenty were present at the afternoon meeting at which Miss Louise Powley, chairman, presided. Dr. M. T. MacEachern dictated for criticism, the proposed minimum standards for dietary departments in standardized hospitals. Miss Martha Dressler presented mimeographed copies of a proposed plan for standardizing house diets, which when completed will be useful for teaching purposes as well as in hospital practice. Miss Jennie Rountree, Associate in Nutrition, at the University of Washington, discussed the possibility of the development of training courses for student dietitians in Northwest hospitals. She was asked to make an investigation of the possibilities of the plan whereby two or three specialized hospitals might associate for the purpose of organizing a student dietitians training course.

CONVENTION NOTICES

THE AMERICAN DIETETIC ASSOCIATION

The Tenth Annual Meeting of the Association will be held at the Hotel Statler, St. Louis, Mo., October 17, 18 and 19, 1927.

Miss Margaret Sawyer, Chairman of the Program Committee is thoroughly familiar with the resources of St. Louis and the adjoining territory. She will provide a splendid program.

The St. Louis Dietitians' Association extends a cordial invitation to all members of the American Dietitians' Association to plan to spend at least four days in St. Louis as its guests.

St. Louis offers many attractions in addition to its central location and lovely Fall weather. There is the beautiful Forest Park with a natural amphitheatre, seating over 9,000, on a hillside and situated on the

bank of the River des Peres. The city is also noted for its public buildings, museums and art galleries.

Besides these things of general interest there will be many places of professional interest to be visited: Washington University with its Medical School; Barnes Hospital in connection with the university; the new Jewish Hospital with its Kosher kitchens and a number of other institutions.

The central location assures a large attendance.

Hotel accommodations will be adequate and reasonably priced.

If an adequate number of certificates are presented, fare and one-half railroad rates will be assured for our members.

AMERICAN HOME ECONOMICS ASSOCIATION

The twentieth annual meeting of the American Home Economics Association is to be held in Asheville, North Carolina, June 21 to June 24, 1927.

AMERICAN HOSPITAL ASSOCIATION

The Twenty-ninth Annual Convention of the American Hospital Association will be held in Minneapolis, October 10 to 14, 1927.

NEWS NOTES

Lena C. Clark writes that she is now at St. John's Hospital, Long Island City, Long Island, N. Y. Miss Clark was formerly at The Greenwich Hospital, Greenwich, Conn.

Mary de Garmo Bryan's new address is 35 East 9th Street, New York City.

Evelyn C. Colburn, formerly an assistant at St. Mary's Hospital, Rochester, Minnesota, is now attending Kansas Agricultural College where she is studying for her M.S. degree.

Edna P. Compton has recently accepted a position at Hahnemann Hospital, Scranton, Pennsylvania.

Neva Densford, formerly at the Lock Haven Hospital, Lock Haven, Pennsylvania, is now at the U. S. Veterans' Hospital, Muskogee, Oklahoma.

Margaret DeWeese may be reached at 2018 North Twentieth Street, Philadelphia, Pennsylvania.

Rena S. Eckman has accepted a position at the State Hospital, Warren, Pennsylvania. She was chief dietitian at Michael Reese Hospital, Chicago, for sometime.

Marion D. Floyd is now at the Waltham Training School for Nurses, Waltham, Massachusetts.

Sister Gabriel has gone from the House of Providence Hospital, West Seattle, Washington, to the St. Eugene Hospital, Cranbrook, B. C., Canada.

Florence A. Haack may be reached at 245 Union St., St. Louis, Missouri.

Edith Hall, formerly Dietitian at the Christian Church Hospital, Kansas City, Missouri, is now at the Davis-Fischer Sanitorium, Atlanta, Georgia.

Mrs. C. D. Henriques is located at 52 Chotsworth Avenue, Larchmont, New York.

Mary Pasoce Huddleson is spending some time in Paris where her husband is engaged in study. She expects to return to the United States in September. Her address is c/o National City Bank, 41 Boulevard, Hausswarm, Paris.

Lucia Hunt, who has been engaged in Nutrition Work with The American Red Cross, has accepted a position at the Piedmont Hospital, Atlanta, Georgia.

M. Estelle Kribs writes that she has taken a position at the Hackensack Hospital, Hackensack, New Jersey.

Lydia Lee's new address is 136 Massachusetts Avenue, Cambridge, Massachusetts.

Dorothy R. Linn is engaged in work in the Laboratory of the Division of Food and Dairies of the State of Illinois. She was formerly at the Armour Company's Laboratory.

Bernice McFarland may be reached at 350 Belden Avenue, Chicago, Illinois.

Florence Meredith is now at the St. Louis City Sanatorium. Previous to this she had been spending sometime in study.

Doris Padelford writes that she is now at 2050 Highland Avenue, Fall River, Massachusetts.

Hope Perkins, formerly at the Cumberland Hospital, Brooklyn, New York, has accepted a position at the Lawrence and Memorial Associated Hospitals, New London, Connecticut

Maude Perry is spending some time in travel before resuming her dietetic work. At present she is in Miami, Florida.

Louisa Grace Pixley is now at Miss Gildner's School for Girls, Princeton, New Jersey.

Bess Pontz, formerly of New York City, is at the Taylor Hospital, Ridley Park, Pennsylvania.

Marguerite Poor is at the Westerly Hospital, Westerly, Rhode Island. She was formerly at the State Hospital, Howard, R. I.

Irma C. Raver is connected with the Dietary Service, 229 Lexington Avenue, New York City.

E. Pauline Richardson, who has been at the University Hospital, Augusta, Georgia, is now engaged in Pre-School Nutrition Work with the Infant Welfare Society in Chicago.

Helena M. Robinson is on a Mediterranean Cruise and will not return until some time in May.

Mary Elizabeth Smith is now at the Baptist Hospital, Houston, Texas.

Dorothy M. Stephens may be reached at 715 Seventh Street, Niagara Falls, New York.

Zoe Wertman has accepted a position at the Edward's Sanitarium, Naperville, Illinois. She was formerly dietitian at the Lutheran Memorial Hospital, Chicago, Illinois.

Betty Ryan, who was formerly at the Jewish Hospital, St. Louis, Missouri, is now at the Bethesda Hospital, St. Louis.

Bertha E. Ashley has accepted a position at St. Johns Hospital, Yonkers, New York. Previous to this she was at the Elk County General Hospital, Ridgeway, Pennsylvania.

Sister St. Louis has gone from the Emergency Hospital, Kankakee, Illinois, to the Mercy Hospital at Urbana, Illinois.

Elizabeth Edwards may be reached at Hillsboro, Illinois, Route No. 2. She was dietitian at the Davis Fisher Sanitarium, Atlanta, Georgia, prior to this.

Flora A. Mathison has accepted a position at the Irvington High School, Irvington, New Jersey.

Esther Dyer is now located at Proctor, Vermont.

Beatrice J. Huntington writes that she is now at 238 North Florida Avenue, Deland, Florida.

Sister M. Praxedes has left St. Mary's Hospital, Kansas City, Missouri, to go to St. Mary's Hospital, Madison, Wisconsin.

Marion Erskine Rouse is connected with the Forecast Magazine, New York City. She was formerly with the Davis Baking Powder Company, Hoboken, New Jersey.

Henrietta Poole may be reached at the Womens' University Club, 106 East 52nd Street, New York City.

Eloise Osborne, who was formerly at the Good Samaritan Hospital, West Palm Beach, Florida, is now at the Charlotte Sanatorium, Charlotte, N. C.

R. Marjorie Martin is at the John D. Archbold Memorial Hospital, Thomasville, Georgia. She was formerly at the Nurses Home of the Womens' Hospital, Baltimore, Maryland.

Mary L. Harrison has accepted a position at the Austin Hospital, Chicago, Illinois.

Grace Augustine may now be reached at 25 Margaret Avenue, Kitchener, Ontario, Canada.

Angeline Shutts has accepted a position at the Letterman General Hospital, San Francisco, California.

Miss Helen Hinman, formerly Dietitian at the Lawrence Memorial Hospital, Medford, Mass., has resigned from her position and is not in active work for the present.

Miss Isabelle Lyons, formerly of the Brockton Hospital, Brockton, Mass., is now at the Lawrence Memorial Hospital in Miss Hinman's place.

MARRIAGES

Imogene Calderwood to M. Madison Taylor. At home, 819 Crittenden Street, N. W., Wasington, D. C.

Mildred Dunscombe to Lafayette Speed at Twinsburg, Ohio, on September thirteenth. At home, Twinsburg, Ohio.

Adah B. Herring to Oscar D. McClintic at Battle Creek, Michigan, on September fourth. At home, Battle Creek, Michigan.

Corita T. F. McKiel to J. M. Moore. At home, 410 Albert St., East Lansing, Michigan.

Yvonne Gervais is now Mrs. Cross. At present she may be reached at the Eastern Maine General Hospital, Bangor, Maine.

Martine Morris to Bert Collins. At home, 1706 Locust Street, Texarkana, Arkansas.

R. Leone Rutledge is now Mrs. Carroll. She may be reached care of the Jewel Tea Company, Chicago, Illinois.

Maude M. Trood is now Mrs. de Twornicka and is at home at the Randolph Apartments, 1176 12th Avenue, West, Vancouver, B. C., Canada.

Florence Roller to Clarence Watson. At home, 148 S. Washington Street, Prescott, Arizona.

ADDRESSES FROM WHICH MAIL HAS BEEN RETURNED

Galloway, Hazel Winders (Mrs.).....2400 Grand Ave., Milwaukee, Wisc.
Johnson, Ruth H.....Jefferson Hospital, Philadelphia, Pa.
Lawler, John.....210 E. 23rd St., New York City
Lorance, Mrs. Luther M.....611 S. Ashland Blvd., Chicago, Ill.
McConahy, Mrs. Mary Swope.....Golden State Hospital, Los Angeles, Cal.
Smith, Blanche.....57 S. Washington St., Rochester, N. Y.

NEW MEMBERS

(October, November, December and January)

*Adams, Alice L.....1017—8th Ave., Oakland, Calif.
Baker, Rose T.....216 N. 34th St., Philadelphia, Pa.
*Baschnagel, Helen A.....219 Van Buren St., N. Iowa City, Iowa
†Beckman, Aile E.....723 Spring St., Ishpeming, Mich.
Bell, Winifred St. Claire.....Fifth Avenue Hospital, New York City
Bennett, Nancy O.....Troy, Tenn.
Bohman, Constance L.....U. S. Veterans' Hospital, Oteen, N. C.
Bolender, Alta.....Miami Valley Hospital, Dayton, Ohio
Bone, Mary L.....Montefiore Hospital, New York City
Brethorn, Mavis A.....New York City Children's Hospital, Randall's Island, N. Y.
†Bryant, Laura F.....McCormick & Co., Inc., 400 Light St., Baltimore, Md.
Cooke, Mildred Chase.....1032 W. 18th St., Los Angeles, Calif.
Cox, Katherine.....Olean General Hospital, Olean, N. Y.
Dammeyer, Marion A.....U. S. Veterans' Hospital, Rutland Heights, Mass.
Dean, Helen A.....Robert Brigham Hospital, Boston, Mass.
DeWitt, Katherine E.....3771 John R. St., Detroit, Mich.
Droll, Medrith.....Six North Fifth St., Richmond, Va.
Drury, Doris C.....639 George St., New Haven, Conn.
Earle, Rebekah K.....Los Angeles City Schools, Los Angeles, Calif.
Edmonds, Mary.....Newport Hospital, Newport, R. I.
Eiler, Louise.....Touro Infirmary, New Orleans, La.
Finkh, Genevieve.....St. Luke's Hospital, Richmond, Va.
Fisher, Katherine.....34th and Pine Sts., Philadelphia, Pa.
Frank, Muriel S.....Ontario Hospital, London, Ont., Canada.
Goetz, Theresa.....25 E. Linden Ave., Atlanta, Ga.
Hack, Lillian.....Cotton Belt Hospital, Texarkana, Ark.
Hacker, Dorothy B.....Macon Hospital, Macon, Ga.
Hall, Gladys E.....Riley Memorial Hospital, Indianapolis, Ind.
Harley, Marjorie K.....Westminster Hospital, London, Canada
Henry, Clara E.....8 West 16th St., New York City
Heseltine, Marjorie M.....Hills Bros. Company, New York City

Hewitt, Laura P.....Harrisburg General Hospital, Harrisburg, Pa.
*Holmes, Joyce.....Downsville, Delaware Co., N. Y.
Hulsebus, Beulah M.....Presbyterian Hospital, New York City
Kahn, Mary H.....Sutter Hospital, Sacremento, Calif.
Kalsem, Millie E.....Iowa Methodist Hospital, Des Moines, Iowa
Kent, Hazel G.....Robert Brigham Hospital, Boston, Mass.
Kerr, Mildred D.....Ohio Valley General Hospital, Wheeling, W. Va.
Kline, Mary T.....Jewish Hospital, Cincinnati, Ohio
Krug, Florence.....Wellseley Hospital, Toronto, Ont., Canada
Ladd, Marion D.....Phillips House, Charles, Boston, Mass.
Lamont, Helen Ridley.....St. Anne's Hospital, St. Anne de Bellevue, Quebec
*McCollin, Katherine I.....4000 Baltimore Ave., West Philadelphia, Pa.
Mitchell, Helen S.....Battle Creek Sanitarium, Battle Creek, Mich.
Moore, Lola E.....4511 N. Newstead St., St. Louis, Mo.
Neville, Grace.....William Newton Memorial Hospital, Winfield, Kansas
Nichols, Helen M.....138 E. 34th St., Cornell Diet Class, New York City
†O'Neill, May L.....Chester Hospital, Chester, Pa.
Oprendek, Caroline C.....2530 Ross Ave., Dallas, Texas
Reist, Esther.....General Hospital, Lancaster, Pa.
Renick, Helen T.....Indianapolis City Hospital, Indianapolis, Ind.
Robinson, Virginia T.....Memorial Hospital, Pawtucket, R. I.
*Roess, Catherine R.....Jefferson Hospital, Philadelphia, Pa.
Rolfe, Jane.....Lafayette Home Hospital, Lafayette, Ind.
Rosbrook, Marcia.....1214 W. Genesee St., Syracuse, R. Y.
*Schaefer, Verona.....University Hospital, Minneapolis, Minn.
Schink, Jeanette.....Kenosha Hospital, Kenosha, Wis.
Schink, Marie.....Bellin Memorial Hospital, Green Bay, Wis.
*Severns, Gertrude C.....Cooper Hospital, Camden, N. J.
Schultz, Ida Ruth.....264—12th St., Milwaukee, Wis.
†Siefert, Esther M.....New Washington, Ohio
Smith, Helen L.....U. S. Veterans Hospital, West Haven, Conn.
*Smith, Marion C.....University Hospital, Minneapolis, Minn.
Spohn, Adelaide.....College of Home Economics, Cornell University, Ithaca, N. Y.
Sprague, Eleanor M.....St. Luke's Hospital, New Bedford, Mass.
Stowell, Lillian J.....436 Flower Ave., E. Watertown, N. Y.
Tillery, Susan E.....Leverying Hospital, Hannibal, Mo.
Todd, Ellen H.....V. G. Hospital, Halifax, N. S., Canada
Wandell, Minnie.....c/o Mrs. F. H. MacLeod, 110 Prospect St., Stamford, Conn.
Watts, Mildred.....Ohio Wesleyan University, Monnett Hall, Delaware, Ohio
Welton, Ruth E.....Fairview, Kansas
Wilkinson, Ruth E.....University of Pennsylvania Hospital, Philadelphia, Pa.

* Junior Members.
† Associate Members.

REPRINTS AVAILABLE

These reprints are available at the Business Office of the American Dietetic Association, 1122–25 East Washington St., Chicago, Ill.

Arthritis, Carbohydrate Studies in. Martha V. Nelson and Julian S. Boyd..... $.15
Biliarytract, Some Effects of Diet on the. Grover H. Copher..... .10
Budgeting the Dietary Department and Purchasing Food Supplies. Lucius R. Wilson. .10
Calves' Liver, Preparation of, for Pernicious Anemia Diets. Thelma Tubbs and Elizabeth Bellinger..... .07
College Courses, Report on, for Prospective Dietitians. Abby L. Marlatt..... .10
College Education and the Food Specialist. Agnes Fay Morgan..... .10
College Graduate, Adjustment of, to Hospital. Work in Nutrition..... .10
Department Budget, Administration Section Report..... .10
Diabetes Mellitus, Food Requirements in Children with. W. S. Ladd..... .17
Diabetic Diets for Children. Julian D. Boyd and Martha V. Nelson..... .10
Dietaries, A Comparative Study of Italian, Polish and Negro..... .15
Dietetic Department, the Place of the, in The Hospital from the Administrator's Viewpoint..... .10
Dietetics, A Chapter in the History of. Martha A. Byerly..... .07
Dietitians, Student, An Accredited Course for. Eva Thallman..... .15
Dietitians, Student, A Checking Scheme for Recording Special Abilities and Qualifications. Amalia Lantz..... .05
Food Fads. Mary Pascoe Huddleson..... .15
Food Habits, Intelligence and Character in Relation to. Haven Emerson..... .07
German Diet, Changes in the. R. R. Kuczynski..... .07
Gout, The Effect of Vegetable Purines on the Blood in. Ruth Wheeler and Bessie I. Wallace..... .10
Hospital Dietary Department, A Forecast. Malcolm T. MacEachern..... .10
Hospital Dietitian, A View of the, from the Nursing Standpoint. Elizabeth A. Greener..... .07
Hospital Food Bills, Economic Analysis of. Ruth Wheeler and Vivian Moe..... .10
Hospital Food Bills, A Nutritive Analysis. Ruth Wheeler and Edna Shalla..... .15
Job Analysis, Residence Hall. Elizabeth Bemis, Lenna Cooper and Mary Walton.. .10
Nephritis, The Principles of Diet Control with Especial Reference to Protein and Salt Restriction. John D. Peters..... .15
Normal People, Certain Tendencies of Modern Hospital Dietaries for. Reginald Fitz and Lautz..... .10
Nutrition Worker in the Hospital. Helen Hubbell..... .15
Peanut, the Chemistry of; A Clinical Study. Florence H. Smith and Russell M. Wilder. .15
Peanut Meal, The Composition of and Its Use as a Diabetic Food. Margaret Mumford Neal..... .15
President's Address. Ruth Wheeler..... .10
Protein Requirement of Children in Modern Specific Diet Therapy. The Importance of. Walter M. Bartlett..... .10
Student Dietitians in Hospitals, Standardization of Courses for. Section on Education. .10
Ulcer of the Stomach and Duodenum, Medical Treatment of. Milton M. Portis... .10
Vitamin Structure, Recent Developments in. Walter G. Eddy..... .10

PLAN FOR DIETITIAN INTERNSHIPS, COLUMBIA UNIVERSITY, BEGINNING IN THE FALL, 1927

By Martha Koehne

PART 1

In addition to strong recommendations as to character and ability, from people in a position to judge, a candidate must have had the following courses before being considered as a possible intern. These courses must have been taken in an institution of recognized standing and the applicant must have secured her Bachelor's degree.

General Chemistry.
Organic Chemistry.
A course in quantitative methods in chemistry would be highly desirable, but is not necessary.
Physiology. Bacteriology. Economics. Sociology.
Principles of Art and Design.
Food Preparation. Nutrition and Dietetics. Household Management.

PART 2

The following courses at Teachers College, Columbia University, are open to candidates for the Master's degree who wish to combine their work at Columbia University, in Institution Economics, with an Internship at Presbyterian Hospital. These courses will be adapted to the individual student and her previous preparation, experience, and needs. A sufficient number of these must be taken to satisfy the requirements of Teachers College and of the Dietary Department of the Hospital, before beginning the hospital internship. While these courses are being taken, the hospital will assume no financial obligations to the candidate. Interns will be selected from this group on the basis of demonstrated ability.

Physiological Chemistry.
Chemistry of Food and Nutrition.
Psychology. Education. Social Science.
Dietetics.
Institution Food Department.
Institution Planning and Accounting.
Institution Management.
Large Quantity Cookery.

PART 3

The following courses must be taken at the hospital during the internship. This internship will last from six months to one year, depending upon the individual concerned,—her previous experience and ability. During this period, the hospital will provide full maintenance.

Management of Dietary Department of a Hospital.
Practice Work in Dietetics.
Diet Therapy.
Educational Methods in Hospital Dietetics.
Professional Ethics.
Seminar in Nutrition.
Research either in Administrative Dietetics, Educational Problems in Dietetics, or in Nutrition and Dietetics.

A total of 32 points, earned at Teachers College and the Hospital, will be necessary for the Master's degree.

The dietary department of the hospital will continue, temporarily, to accept student dietitians for the usual six months training course. It will be the policy, however, in filling up the quota, to give preference to those who wish to prepare themselves more fully for entering the field of hospital dietetics.

REPORT OF THE MEETING OF THE EXECUTIVE COMMITTEE OF THE AMERICAN DIETETIC ASSOCIATION JANUARY 3, 1927

The Midwinter Meeting of the Executive Committee of The American Dietetic Association was held at the Hotel La Salle, Chicago, Illinois, January 3, 1927, at 10:00 a.m.

Florence H. Smith, President of the Association, presided. The following executive officers were present: Phyllis D. Rowe, First Vice-President; Theresa A. Clow, Treasurer; Margaret Gillam, Chairman of the Administration Section; Kate Daum, Chairman of the Diet Therapy Section; Katherine Mitchell Thoma, Chairman of the Education Section, and Anna E. Boller, Executive Secretary.

The order of business was as follows:

Budget. The report of the Budget Committee as presented at the Executive Committee Meeting, October 10, 1926, was considered. Necessary changes were made to allow for new plans.

Journal. Florence H. Smith told of the JOURNAL problems and stated that she was attempting to follow the suggestion made last year that local groups edit certain issues of the JOURNAL. This has been taken up with several groups but no replies had been received.

1. The selection of a permanent editor was discussed at length but no decision could be made at that time.

A motion was made by Katherine Mitchell Thoma and seconded by Margaret Gillam that the editor of the JOURNAL be the editor for the Association and edit all material for general distribution. The motion was carried.

2. Subscriptions. The concensus of opinion was that the growth of the JOURNAL is very gratifying. Each member of the Executive Committee is to help obtain subscriptions in her own community.

a. It was suggested that we change the present policy of billing for subscriptions. In the future one issue of the JOURNAL is to be sent before the bill.

b. A mimeographed subscription blank is to be used in the future.

c. It was decided to send complimentary subscriptions of the JOURNALS to honorary members, but not to life members.

3. Advertising. *a*. The decision was made to exchange advertising with professional and certain semi-professional magazines.

b. The suggestion was made that we try to obtain advertisements of summer school courses from universities and colleges.

c. Phyllis Rowe was appointed to work with the Executive Secretary in securing advertisements.

4. Collecting material. *a*. Inasmuch as many dietitians do not have access to medical libraries, the suggestion was made that each issue carry a résumé of some piece of work. Some of the suggestions were as follows:

Present status of vitamins..

Résumé of recent work done on nephritis, diabetes, obesity, anemia and pediatrics.

Kate Daum was asked to be responsible for four such articles, these to represent the Diet Therapy Section's contribution to the JOURNAL.

In addition, Katherine Mitchell Thoma, Chairman of the Education Section and Frances Stern, Chairman of the Social Service Section, were asked to furnish four articles each.

Phyllis Rowe was asked to turn in the articles on Administration.

b. Each section chairman was asked to prepare a plan of study as a suggestion to local associations for their programs for the year.

5. News notes. *a*. The local associations are to be encouraged to send reports of their meetings.

6. Kate Daum made a motion seconded by Phyllis Rowe that the American Dietetic Association Placement Bureau advertising be the only placement advertising in the JOURNAL. Motion carried.

Office Organization. 1. Moving of office. Motion made by Kate Daum and seconded by Margeret Gillam to move the executive office of the Association into the loop district in Chicago, to increase the efficiency of its various activities. Motion was carried.

Type of building was discussed and the concensus of opinion was that the Association should locate in a building with a desirable professional group and in an office alone, if possible. In case such surroundings were impossible either an office in a suite with professional people, or a separate office in a building with reputable business firms was the next choice.

Reorganization of office personnel. The Executive Secretary's resignation was presented and the following plan of carrying the work for the present was adopted.

Dorothy B. Richmond, now Secretary to the Executive committee is

to be made Business Manager at a salary of $135.00 per month. Her duties were listed as follows:

1. Office routine business such as:

a. General bookkeeping, which includes monthly statements to the treasurer.

b. Sending bills for dues (treasurer to send two letters to those who are delinquent).

c. Answering letters and referring matters which she is unable to handle to the proper authorities.

d. And other matters which properly belong in a central office.

2. Placement Bureau. To act as director with the assistance of an advisory committee. This committee to be composed of the Chicago members of the Executive Committee is to help where there is a problem in placing because of unsatisfactory references or because of a request from a questionable institution.

3. Journal. To act as business manager in handling subscriptions and advertisements.

Executive officers. After a discussion it was decided to pay the expenses of officers to the Convention as in previous years.

A precedent book is to be made at the end of the year. Each member of the Executive Committee will be expected to send a report of the year's work to the president as a guide to future officers.

Other committee chairmen. Chairman of Program Committee is to have a definite budget to cover speakers expenses and her own expenses to the Convention.

Chairman of Publicity Committee is also to have her expenses paid to the Convention.

Exhibit policy. Executive Committee will approve lists of exhibitors as formerly.

A committee will be chosen to take charge of the selling of space.

Revision Committee. It was moved by Katherine Mitchell Thoma and seconded by Kate Daum, that the recommendation be made to the Revision Committee to increase the dues to $5.00 and include the subscription to the JOURNAL.

Membership lists. It was voted that our exhibitors and advertisers be protected by adopting the policy of refusing to send membership lists to other commercial firms and advertising agencies.

An informal discussion of the work of each section was carried on until the meeting adjourned at 6:20 p.m.

REPORT OF EXECUTIVE SECRETARY THE AMERICAN DIETETIC ASSOCIATION[1]

The growth of the work in the office this year has been surprising. Up to a short time before the Chicago Meeting last October, we had been getting along with a stenographer in the office three days a week. As Convention activities increased, it was necessary to employ one half-time stenographer and after March 1926, a full-time stenographer was needed. We have had additional part-time assistance for the past two or three months.

The question has often come up as to just what the office does. At present we are receiving an average of twenty-five to thirty letters daily and are sending out more than that number. The nature of the correspondence is as follows:

General with officers, regarding administration of Association.

General Convention, including plans with hotel, sale of exhibit space, requests for information, etc.

Membership, requests for information and for membership blanks.

Placement Bureau, requests for information and applications, collection of references, correspondence with hospitals needing dietitians, etc.

Journal, subscriptions, information regarding subscriptions, requests for back numbers, correspondence with agencies and Journal advertising.

Requests for information concerning dietary departments in hospitals where members have been offered positions.

Requests for information regarding various phases of dietetics. Many of these are coming from young women, who are finishing college and wanting training in hospital dietetics.

Last year a new mimeograph machine was purchased. This has been very useful as a great deal of the above work could not have been carried had it not been done on this machine. A comparative statement will show what it has saved.

Printing this year has cost us $48.57 as against $143.21 last year. The last figure does not include the mimeographing. When we consider that about 16,000 sheets of material have been turned out in the last four months, it shows that the machine has more than paid for itself.

[1] Read before the American Dietetic Association at the Business Meeting on October 11, 1926. Received too late for publication in 1926.

Postage on correspondence is another interesting item. $287.76 has been spent in nine months. Officers have requisitioned some, but the amount is very small, probably not to exceed $25 to $30.

We have also attempted to become more business like in the handling of our finances. We have changed our bookkeeping system from the cash receipts and disbursement basis, to an income and expense basis. This was done upon the suggestion of our auditor, and although the making of the transfer has entailed a great deal of work this year, the future work will be much easier and reports will be more comprehensive. The treasurer's report will explain this more fully.

THE JOURNAL

The first year, as you know, the JOURNAL was sent free of charge to members and to a selected group, chosen by the Executive Committee.

The expense of the JOURNAL was such that during the year it seemed necessary that we consider either the raising of the dues or a small subscription price to the members. The latter was decided upon, at a dollar and a half per year.

The cost of the JOURNAL during the last nine months is our basis of figuring this year as follows:

Editor's Expenses	$100.00
Journal Board	62.58
Printing	1529.19
Material	11.62
Home Economics Meeting	41.81
Miscellaneous	1.15
Agency Discount	2.63
Total	$1748.98

The receipts from the JOURNAL have been as follows: JOURNAL subscriptions $604.45, JOURNAL advertisements $231.42, totaling, $835.87. We have received this money only within the last four or five months and this cannot fairly be balanced with the cost.

The estimated cost for the coming year with the development which is planned, is $2,200.00. We hope to be able to double our advertising, bringing in $500.00, which will still leave $1700.00 to be made up from subscriptions. If the members as a whole were to subscribe, this would be very encouraging. On October first, there were 771 members, 333 of whom had subscribed.

The JOURNAL is established. It is becoming known in many countries,

but being a scientific publication appealing only to a specialized group of people, we cannot expect a rapidly increasing subscription list except from our members, and allied professions.

PLACEMENT BUREAU

The Placement Bureau has been very active during the past year and in making a survey of the work some very interesting points have been brought out which may be of interest to the profession as a whole.

Comparing the number of applications received and the number of requests for dietitians month by month we find that there has been the greatest number of applications in the Fall and early Winter months, while the greatest number of calls for dietitians has been during the Spring and Summer.

Realizing the impossibility of an expensive advertising campaign among hospitals and institutions employing dietitians, a country wide committee has been organized and now consists of 35 members in the largest cities. Mrs. Dorothy Stewart Waller as Chairman has been very helpful in sending out enthusiastic letters and inspiring the members of the Committee to send in names of institutions where there are openings, and to refer requests to the office.

In total, we have received 107 applications from dietitians and 109 calls for dietitians. A complete survey of the Bureau will be worked out in the near future. All that is possible at this time is to state some of the facts observed. Of the 107 registered only 43 were without positions and in need of immediate placement, 11 had given up their work and were taking rather extended vacations before continuing, 40 were either dissatisfied with their work or thought they were ready for advancement, 13 were satisfied for the present but wanted to be in the active file in case an opening in their special work would come to the Bureau.

Sixteen have been placed and 34 others were offered positions, but refused for the following reasons:

Would not consider salaries offered
Had accepted other positions
Had changed plans
Would not consider location

Of those who refused positions, 12 are still in the active file. The 107 applicants' names were suggested 455 times or about an average of 4 per applicant. The references have been classified as: very good, good,

fair, poor, good but incomplete (with the exception of a personal characteristic). Of the 16 placed, 15 had given us very good references. Of the 33 still active, 26 have good references. One hundred and nine executives have asked for dietitians. Thirteen institutions are still in the active file.

An analysis of the factors which probably enter into our failure to place those with whom we were not successful, and probably influencing the placing of those persons still in our active file are rather interesting as they give a clue to what is needed most in the profession.

Salary asked too high	8
Lack of training	16
Lack of experience	11
Undesirable personal characteristics	10
Wish for a very special location	9
Poor or incomplete references	10
Changed plans	2

It has been possible to carry on this amount of work with a small office force because a great deal of the work has been simplified by printed and mimeographed forms.

ANNA E. BOLLER,
Executive Secretary.

REPORT OF THE SOCIAL SERVICE SECTION OF THE AMERICAN DIETETIC ASSOCIATION, OCTOBER, 1926[1]

This year the work of the Social Service Section has been very introspective in nature. In order to know better the interest of the section, each member of the American Dietetic Association was asked the following questions:

Are you interested in Social Service Section?

Why are you interested in it?

What would you like to see the section do this year?

The replies gave us a tentative roster for the Section and told us something of the interests and problems of the group.

Using this information as a basis—a form was worked out (with the assistance of Miss Roberts of the University of Chicago and Miss Stern and Miss Reyner of the Boston Dispensary) dealing with the methods used in Out-patient and Public Health Nutrition work. These forms were sent to all members of the American Dietetic Association and also to others who were interested. This list of non-members was given to the Executive Secretary that they might be interested in becoming members of the Association. The reply to this form letter was very encouraging, as we had about 12 per cent returned.

It has been very difficult to tabulate the results of these replies because every reply told a different story. Each is working out her own salvation to a greater or lesser degree.

This is, of course, to be expected because Out-patient and Public Health work is comparatively young. However some interesting points of the work have been indicated.

Work in the out-patient diet clinic varies from the handling of the diabetic patient only to the handling of any case that may be benefited by diet therapy. The methods of patient instruction include individual oral instruction; use of exhibits; printed material; posters; individual demonstration; group demonstration and group instruction. In one case home contacts were made routinely by the dietitian on cases in which there was

[1]Received too late for publication in 1926.

no major social problem. In other instances home contacts were made through the Social Service Department and in one case a Social worker was assigned to the diet clinic.

In Public Health nutrition, similar variations are true. Some dietitians are working in a general nursing program, acting in the capacity of consultant or special supervisor. Others are working in a specialized program doing field work or especial group work. It would seem there were many ways in which this section could be of help in working out our various programs.

Last but most important is indicated the possibility of using the Outpatient and Public Health field as a teaching center for the Medical and dietetic student. Successful work in this field requires a special training and knowledge as one deals with the patient outside the institution.

RACHEL W. SANDERS, *Chairman.*

REPORT OF THE SOCIAL SERVICE SECTION OF THE AMERICAN DIETETIC ASSOCIATION, 1927

The interest shown in the work of the dietitians outside the walls of the hospital wards, at the last meeting of the American Dietetic Association, has stimulated anew the interest in the Social Service Section.

Because this dietitian must always consider her patient in terms of the social background,—economics and education, as well as diet therapy, —the name Social Service Section does not designate the field or include the variety of community work being done therein. It is hoped that a new name will be forthcoming for this Section to properly express its purpose. To this end the newly formed committee and the consultant group have been chosen with the thought of including the various types of work represented by the community dietitians.

Committee

1. Miss Florence E. Bateson, Johns Hopkins Hospital, Baltimore, Md.
2. Blanche B. Edwards, East Harlem Health Center, New York.
3. Anna L. DePlanter, Child Health Association, Philadelphia, Pa.
4. Helen Nichols, Cornell Medical School, New York.
5. Jean Reyner, Vice-Chairman, The Boston Dispensary, Boston, Mass.
6. Rachel Sanders, Infant Welfare, Chicago, Ill.
7. Charlotte Sloan, Lane Hospital, San Francisco, Cal.
8. Gertrude T. Spitz, Secretary, Massachusetts General Hospital, Boston, Mass.
9. Frances Stern, Chairman, The Boston Dispensary, Boston, Mass.

Consultant group

Anna E. Boller
Martha Davis
Margaret M. Edwards
Marjorie Foster
Lucy H. Gillett
Constance C. Hart
Fairfax T. Proudfit
Lydia J. Roberts
Mary S. Rose
Margaret Sawyer
Clyde B. Schuman
Florence H. Smith
Louise Stanley
Ruth Wheeler
Edna N. White

The newly formed Committees has been appointed with the idea of reaching all types of work representative of community dietitians. A survey of dietitians engaged in community work was ably begun by Miss Rachel Sanders, Chairman of the Social Service Section last year. As the purport of the questionnaire may not have been fully understood, the

Committee asks that any one occupied in the following fields send her name and type of work to the Secretary, Miss Gertrude T. Spitz, so that she may have as inclusive a list as possible.

Out-Patient Dietary Departments
Health Centres
Nursing Organizations
Public Health Organizations { Private / Public
School Lunches
Nursery Schools
Educational Departments of Commercial Concerns
Relief Organizations
Extension Service
And others

Although this group will function as a separate section during the year, it is hoped that at the annual meeting it can make its contribution, demonstrating its particular field as a part of the other sections, Diet Therapy, Education, Administration, and thus effecting a closer relationship.

For working purposes a small committee has been apoointed, but the development of a sound section is dependent on the support of the whole Association and we therefore solicit each one to send in some suggestions.

FRANCES STERN, *Chairman*,
GERTRUDE T. SPITZ, *Secretary*.

REPORT OF THE SECTION ON EDUCATION OF THE AMERICAN DIETETIC ASSOCIATION, 1927

The Standard Course for Student Dietitians

The Committee on Education wishes to stimulate critical comment, constructive as well as destructive, of the proposed outline of a standard course for student dietitians. It is hoped that enough live interest will be expressed during the next few months so that when the outline is brought up again for discussion and possibly for definite vote members of the association will be sufficiently familiar with its details to know what they are voting for. Perhaps local associations could incorporate in one of their regular programs a discussion pro and con of each of the requirements of the proposed course for student dietitians.

What would you think of modifying the two outlines Grade A and B into one standard course? Let us have your opinions.

As a suggestion of the type of criticism we would like to have we are publishing below a copy of a letter received from Miss Vera Howard.

(Signed) K. Mitchell Thoma, *Chairman*
Committee on Education, American Dietetic Association, 1927.

Miss Catherine Mitchell.

My dear Miss Mitchell:

From the point of view of several of us here in New York there are a number of objectionable features in the standard outline for Student Dietitian courses as tentatively accepted in Atlantic City. As I understand that your committee is prepared to receive suggestions with a view to modification, may I be allowed to present my views and those of my associates in Bellevue and Allied Hospitals.

I. We object to the classification A and B. Naturally no desirable student would by preference select a second grade hospital for training and any hospital offering such training would at once be out of the running.

On the other hand, it is conceded that there may be two kinds of training, differing in nature but of equal rank. For example, at Belle-

vue we aim to train dietitians for administrative positions. As a matter of fact we give a good deal of time to practice in Diet Therapy but our chief purpose is to develop the administrative ability which we demand of our dietitians in salaried positions. Our own graduates are therefore more satisfactory for us than dietitians no matter how excellently trained under a strictly scientific routine.

My suggestion is that we omit the A and B classification. Let all hospitals offering training for dietitians be either grade A or unclassified, at least for the present. Let the standard qualification for grade A be sufficiently flexible to admit both types of training referred to, but let each hospital state definitely which type is offered so that the student may not enter training with a misunderstanding. Perhaps "Administrative" and "Metabolic" would be sufficiently descriptive.

II. Under the heading, "Recognition" Paragraph I, Grade A. We object to "A. D. A. membership of all dietitians in constant employ." We feel that such membership, while most desirable, is not strictly relevant to the matter of training and that it favors of propagandism which should be foreign to a professional organization. Possibly a change of wording such as "All dietitians to be *eligible* for membership in the American Dietetic Association" would cover our objection.

III. Under "Capacity" we object very strongly to the second paragraph requiring a minimum of 25 private rooms. Under this ruling none of the large public hospitals can ever qualify since the charitable nature of such a hospital is its reason for existence. This lack is, we feel, more than counterbalanced by the variety of the service and the wealth of material which is available for research. In Bellevue, we have had under treatment, practically every known disease including the strictly European and Asiatic diseases which are almost never met with inland. Compared with such experience we believe that the placing of expensive china and the broiling of a squab is of minor importance. Could this not be altered to read "25 or more individual trays" or could it not be omitted altogether at this point and included as an elective under special duties.

IV. Under "Entrance Requirements" we cannot consistently limit our students to those with a Bachelor's Degree. We give preference always to such students and we feel that the requirement is wholly proper, but inasmuch as City, County, State, and Federal Government accept dietitians with two years training, we in public institutions may not exclude them as students. May we not hold this point in abeyance for at least three years, and in the meantime use every influence to raise the standard which our government requires.

V. Under the caption "Duties of Student Dietitians—Diet Therapy" we object to (4) "Interviewing and instructing patients on special diet règime." We cannot agree that the average student dietitian is capable of this important duty. Personally, I think that the psychological effect of such instruction would defeat its purpose. A quality of poise and self assurance which few students possess, is needed to inspire confidence and respect in the patient. We do not wish to subordinate patients care to the training of students to that extent, and I am convinced that it would be undesirable as a required duty.

VI. "Theory of Diet Therapy C-1—Conferences with specialists on history, theory, and content of all special diets." We think that this requirement is impractical. Our specialists are extremely busy and it is hardly to be expected that they will discuss their cases individually with student dietitians. If the dietitian can herself contribute something of value, discussion will be spontaneous and not a necessary requirement.

I have seen nothing in the remainder of the outline which we do not, or cannot offer our students. The amount of time given to conferences is a bit difficult to live up to but it is not impossible.

Please do not assume that our attitude toward the standardization is wholly antagonistic. There can be no question as to its desirability. We do feel, however, that since public hospitals are employing such great numbers of dietitians, they should have the privilege of training them to the work required, especially as students coming to us from training courses in private hospitals are often totally unfitted for our work.

I feel confident that your committee will be of open mind in this matter, and that our objections and suggestions will receive full consideration in the report which you will present to the Association at the 1927 convention.

(Signed) VERA W. HOWARD,
Departmental Dietitian, Bellevue and Allied Hospitals.

Miss Howard,
Allied Municipal Hospital,
New York City.

My dear Miss Howard:

I am very glad to have your letter of constructive criticism of the tentative outline of standard courses for student dietitians. I am making copies of your letter for the other members of the committee. Until I

hear from them I can make no official report as chairman of the Committee. As just one member of the American Dietetic Association to another I should be glad to discuss it with you.

I. I agree with you that the classification of courses as A and B is undesirable. I believe with you that no student would care to take training in a hospital whose course has been graded B. I believe we should have only one course. A standard course for Student Dietitians —Hospitals offering courses would be listed as approved by the A. D. A. If not approved the name would not appear on the list. I believe by slightly modifying the tentative outline it could be made to include all hospitals with facilities for educating student dietitians.

An acceptable course for student dietitians should, I believe, include both administrative and diet therapy experience. As a profession we are not ready to specialize to the extent of having dietitians with a one sided training.

With the exception of the few who enter straight research work I believe that most dietitians managing the therapeutic diets in a hospital must of necessity do considerable executive work too. I feel too that any dietition in an administrative position must also have had a thorough training in Diet Therapy.

You "aim at Bellevue to train dietitians for administrative positions." But as a matter of fact you do "give a good deal of time to practice in Diet Therapy." "In Bellevue we have had under treatment practically every known disease including strictly European and Asiatic diseases which are almost never met with inland—etc."—I quote from your own letter to support my own feeling that any hospital which has facilities to offer a standard course to student dietitians is giving them both administrative and diet therapy training.

II. Your objection to the sentence "A. D. A. membership of all dietitians in constant employ" is very sane. I do not even see the necessity that all dietitians be eligible. There are, we all know, many able dietitians holding positions of responsibility who would not under the new ruling be eligible for membership. Should they be released from these positions in order that the hospital's course for students be approved?

III. A standard course should include all types of service. Could not students in municipal hospitals affiliate for some short period of time, possibly two weeks in some private institution? Would it not be advisable to give the students an opportunity to observe the more elaborate service?

IV. Entrance requirements: It does not seem to me it would be con-

sistent for the A. D. A. to approve the education of students who would not be eligible for membership. Is it right to send young women into a profession in which they will be handicapped at the start?

V. Duties of student dietitians: A student with the foundation of a Bachelors Degree should surely possess poise enough to interview patients and give them dietary instruction. True you will occasionally have a student incapable of carrying this responsibility. That student is probably too immature for hospital work. This particular experience should be given the student in the latter half of her course and under the supervision of the dietitian in charge of that branch of work.

VI. I agree with you that "conferences with specialists, etc.," is entirely impractical. The exceptional student may make this contact through some special opportunity. It surely could not be a requirement for all students.

VII. One hour a week rather than five for conferences seems to me an acceptable minimum requirement.

I shall be very glad to have further comments from you and your New York group.

Yours very truly,

(Signed) K. MITCHELL THOMA,
Dietitian, Michael Reese Hospital.

REPORT OF THE DIET THERAPY COMMITTEE MARCH, 1927

The following programs are submitted by the committee on Diet Therapy with the hope that they may prove suggestive to some program committee. It is realized how difficult it is to plan meetings satisfactorily for widely scattered groups working under such different conditions.

A program on Pernicious Anemia seems particularly pertinent at this time with the widespread interest that has been developed by the Murphy-Minot diet regime.

The volume of work on the experimental production of nephritis largely by diet, calls attention to the second subject.

These suggestions can be handled in various ways, with the aid of a physician to discuss the medical aspects of the case and with the discussion of diets and diet procedures by dietitians. The literature might be reported on by a group of members or discussed by a single member. The diet therapy committee will be glad to help further in any way.

Nephritis (Suggested Program)

The structure, physiology and functions of the normal kidney
Relation to other organs

Nephritis:

- Definition
- Classification, etiology, incidence, treatment, duration and outcome of nephritis in children and adults

Significant literature:

- Drummond, J. C., Crowdin, A. P., and Hill, E. L. G.: Nutrition on high protein dietaries. Jour. Phys., 56: 413, 1922.
- Miller, A. J.: The influence of high protein diet on the kidneys. Journ. Exper. Med., 42: 897, 1925.
- Newberg, L. H.: The production of Bright's disease by feeding high protein diets. Arch. Int. Med., 24: 359, 1919.
- Polvogh, McCollum, and Simmonds: Bull. Johns Hopkins Hosp., 34: 168, 1923.
- Lieb: The effect of an exclusive long continued meat diet. Jour. Amer. Med. Assoc. 87: 25, July 5, 1926.
- Jackson and Riggs: Effect of high protein diet on rats. Jour. Biol., Chem., 67: 101, 1926.
- Newflerg: Etiology of nephritis. Medicine, 2: 1923.
- Addis, T., MacKay E. M., and MacKay L. L.: The effect on the kidney of the long continued administration of diets containing an excess of certain food elements I. Protein and ceptein. Jour. Biol. Chem., 71: 139, 1926. II. The effect of excess acids and alkali. Jour. Biol. Chem., 71: 147, 1926.

Osborn, Mendel, and Winternitz: Physiological effects of diets unusually rich in protein or inorganic salts. Jour. Biol. Chem., 71: 317, 1927.

Newberg, Marsh, Clarkson and Curtis: Dietetic factor in etiology of chronic nephritis. Jour. Amer. Med. Assoc., 85: 1703, 1925.

Nuzum, Osborne, and Sansum: Experimental production of hypertension. Arch. Int. Med., 35: 492, 1925.

Sansum, Blatherwick, and Smith: Basic diets on treatment of nephritis. Jour. Amer. Med. Assoc., 81: 883, 1923.

PERNICIOUS ANEMIA (SUGGESTED PROGRAM)

Discussion of pernicious, anemia:

Etiology, incidence, treatment, duration and outcome. By a medical man

Significant literature:

1. F. J. Rohner: Pernicious anemia. A study of 127 cases. Jour. Iowa State Med. Soc., 12: 216, 1922.
2. Whipple, Hooper, and Robscheit: Blood regeneration following simple anemia. Amer. Jour. Physiol. 53: 151–67 (1920), ibid., 53: 236 (1920).
3. Idem: Favorable influence of liver, heart, and skeletal muscles in diet on blood regeneration in anemia. Amer. Jour. Physiol., 72: 408 (1925); ibid., 72: 431.
4. Idem: Iron reaction favorable, arsenic and germanium inert in severe anemia. Ibid., 72: 419 (1925).
5. Gettler and Lindeman: Blood chemistry of pernicious anemia. Arch. Int. Med., 26: 453–58 (1920).
6. Gibson R. B., and Howard C. P: Metabolic studies in pernicious anemia. Arch. Int. Med., 32: 1–16 (1923).
7. Minot and Murphy: Treatment of pernicious anemia by special diet. Jour. Amer. Med. Assoc., 87: 470–76 (1926).
8. Murphy and Minot: A special diet for patients with pernicious anemia. Boston Med. and Surg. Jour., 195: 410–11 (1926).
9. Koessler, Maurer, and Laughlin: The relation of anemia, secondary and primary to vitamin A deficiency. Jour. Amer. Med. Assoc., Aug. 14, 1926, 87: 476–482.
10. Mitchell and Schmidt: The relation of iron from various sources to nutritional anemia. Jour. Biol. Chem., 70: 471 (1926).
11. Hart and Steenbock: Iron in nutrition. Jour. Biol. Chem., 65: 67 (1925).

Report from dietitians covering:

1. Previous diet history and dietary habits of cases.
2. Appetite—means used to stimulate, etc.
3. Use of liver, extent, difficulties, etc.
   (a) Clinical improvements as indicated by change in hemoglobin, red blood cell count, differential count, weight of patient
   (b) Methods of serving (demonstration)

The outline for the program on "Accuracy in Special Diets" is suggested with the idea that this is good material for a round table discussion. Most of us need to scrutinize our methods of preparation, calculation, etc., as much unnecessary work is being done and students and doctors alike have a false idea of the accuracy necessary and obtained. Methods of serving, recording and follow-up should be stressed particularly. A frank discussion and an exchange of ideas should prove most valuable.

ACCURACY IN SPECIAL DIET WORK (SUGGESTED PROGRAM)

Standards determined by:

A. Calculation: Accuracy in published food composition tables: raw, cooked. Value of decimals in calculation.

B. In work determined by

1. Equipment, such as scales, utensils, casseroles, etc.
2. Routine procedures.
3. Methods of serving:
   - Individual tray service
   - Preparation of individual dishes
   - Service from pantry

C. Records:

- Methods of ordering—Methods of discontinuing
- Number of, and duplication of
- Records on charts:
  - Original or copied
  - By whom
  - When
  - How supervised
- Records in diet kitchen, original or copied.

D. Methods of calculating food returns:

- Value and importance
- Recorded how and by whom

E. Importance of likes and dislikes:

- Information obtained how
- How recorded
- How used

F. Importance of knowledge of:

- Diet history and dietary habits of patient:
  - Racial
  - Personal
  - How used
  - How obtained

DIET THERAPY COMMITTEE

FAIRFAX PROUDFIT, Memphis, Tenn.
MARTHA DAVIS, Scripps Metabolic Clinic, La Jolla, Calif.
MARY HARRINGTON, University Hospital, Ann Arbor, Mich.
MARY NORTHRUP, Montefiore Hospital, New York City
ELIZABETH WYCKOFF, Presbyterian Hospital, New York City
THELMA TUBBS, Peter Bent Brigham Hospital, Boston, Mass.
DR. RUTH WHEELER, Vassar College, Poughkeepsie, New York
RUTH COOLEY, Jewish Hospital, St. Louis, Mo.
MARY BUCKLES, Kansas City General Hospital, Kansas City, Mo.
MAME PORTER, Toronto General, Toronto, Ontario, Canada
NELDA ROSS, University Hospital, Iowa City, Iowa.

KATE DAUM, *Chairman.*

READING NOTES

THE EFFECT OF A LOW CARBOHYDRATE DIET ON POST-OPERATIVE GAS PAINS.[1] (Lee D. Cady, M.D., and N. A. Womack, M.D., The best indication of the unsatisfactory control of post-operative gas pains is shown by the variability of the post-operative routines found in the leading hospitals. There seems to be no specific method by which this disturbing complication can be entirely avoided. Morphine, pilocarpine, eserine and atropine have not proved useful except for transient relief of discomfort. It is generally conceded that undue manipulation of the intestines will enhance the incidence and severity of gas pains. O'Keefe (1922) has shown that pre-operative catharsis and post-operative glucose retention enemata are conducive to gas pains. There has been considerable work done on the origin of gas in the gastro-intestinal tract. As early as 1912 Woodyatt and Graham noted that there was a diffusion between the gases of the blood and those of the alimentary canal. Recently McIver, Benedict and Cline have reported their observations on distension resulting from air swallowed during and after anesthesia.

In this analysis the effect of gases originating from intestinal fermentation was studied. Over 80 patients were observed and complete data collected in 58 cases. They were divided into three groups; a control group, those treated with a low carbohydrate diet and those given a low carbohydrate diet with two retention enemata of lactic acid milk. The patients were observed for 7 post-operative days and records made of their complaints and apparent conditions. The stools were studied for the presence or absence of B. welchii. The control group of patients were given the Barnes Hospital post-operative diet of liquids including sweetened fruit juices, and soft diet etc. as soon as tolerated. The special diet consisted of citrous fruit juices sweetened with saccharine. As the diet was increased carbohydrates were restricted wherever possible. The third group of patients were given the same diet with two small retention enemata of lactic acid milk after operation.

It was found that the low carbohydrate diet markedly diminished the incidence of post-operative discomfort. Mild acidosis sometimes occurred but it could usually be ignored. A few patients were given intravenous injections of glucose. Because of the possibility of acidosis this low carbohydrate diet is not recommended in patients with severe liver damage. The patients having abdominal pelvic operations followed by glucose solutions per rectum had somewhat more discomfort than the patients not having the glucose. The lactic acid enemata did not seem significant in relieving or increasing discomfort. It was noted that patients having B. welchii in the stools did not have quite as much discomfort in any of the groups as those patients who did not have them. However Kendall's report (1926) does not indicate that gas production is the chief source of discomfort in patients infested with B. welchii and who have a relative carbohydrate intolerance.

M. H. C.

[1] From the Departments of Surgery and Internal Medicine, Washington University School of Medicine and the Barnes Hospital.

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